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Class / Subclass(es)

Earliest Priority Filing Date: 2-16-2000

Point of Contact:
Alexandra Waclawiw
Technical Info. Specialist
CM1 6A02 Tel: 308-4491
11-10-03

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Enter your Search Topic Information below:

Please seach for the following:

1) A non-natural heteropolymeric pulmonary spreading agent comprising at least one N-substituted glycine residue. (there is a claim as broad as above)

2) More narrowly, the agent can be surfactant-associated protein B (SP-B)(especially residues 1-25) or surfactant-associated protein C (SP-C)(especially residues 5-32).

3) A composition containing the spreading agent above and any one or a combination of a phospholipids, analogs of phospholipids and/or commercial surface active agents.
Examples of phospholipids include dipalmitoylphosphititidylcholine, phosphatidylcholine, phosphatidylglycerol, phosphatidylethanolamine, phosphatidylinositol, phosphatidylserine.
4) The composition may also contain palmitic acid.

5) a pulmonary surfactant composition comprising a spreading agent and a lipid admixture combined with the spreading agent wherein the spreading agent has the structure:
HN-X1-X2PVHLKR(NX3)n-CONH2
wherein X1 and X2 can be an F residue or a C-palmitoyl residue, wherein NX3 is an N-substitutued polypeptoid with X3 being either ssb

See last page for full view

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     (FILE 'STNGUIDE' ENTERED AT 14:25:55 ON 10 NOV 2003)
               DEL HIS Y

     FILE 'REGISTRY' ENTERED AT 14:35:54 ON 10 NOV 2003
               ACT SCHNIZER/A
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L1   (       144)SEA FILE=REGISTRY ABB=ON  PLU=ON  PVHLKR/SQSP
L2   (         0)SEA FILE=REGISTRY ABB=ON  PLU=ON  (P'NVA'AND'NLE')/SQSP
L3           144 SEA FILE=REGISTRY ABB=ON  PLU=ON  L1 OR L2
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               E SURFACTANT ASSOCIATED PROTEIN B/CN
               E SP B/CN

     FILE 'CAPLUS' ENTERED AT 14:36:46 ON 10 NOV 2003
L4            65 S L3
L5        138914 S SURFACTANT# OR SPREADING AGENT#
L6            52 S L4 AND L5
L7        138809 S SURFACTANT?
L8         2663 S L7 (L) (B OR C) OR SP C OR SP B
L9           36 S L8 AND L4
L10       76647 S PHOSPHOLIPID#
L11        4121 S DIPALMITOYLPHOSPHATIDYLCHOLINE OR PHOPHATIDYL?
L12           5 S L11 AND L4
L13          15 S L10 AND L4
L14          16 S L12 OR L13
L15         247 S L8 AND L10
L16         120 S L8 AND L11
L17         304 S L15 OR L16
L18         262 S SPREAD? (2A) AGENT#
L19           4 S L17 AND L18
               SET SFIELD BI
               SET SFIELD OBI
L20         368 S N(S) SUBSTITUT? (S) (G OR GLY OR GLYCINE)
L21           5 S L20 AND L7
L22           0 S PULMONARY AND L20
L23           0 S L18 AND L20
L24          20 S L19 OR L14
L25           8 S L18 AND (L10 OR L11)
L26          24 S L25 OR L24
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STRUCTURE FILE UPDATES:     9 NOV 2003  HIGHEST RN 614715-63-8
DICTIONARY FILE UPDATES:    9 NOV 2003  HIGHEST RN 614715-63-8

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in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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L2   (         0)SEA FILE=REGISTRY ABB=ON  PLU=ON  (P'NVA'AND'NLE')/SQSP
L3           144 SEA FILE=REGISTRY ABB=ON  PLU=ON  L1 OR L2
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'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

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L4            65 S L3
L5        138914 S SURFACTANT# OR SPREADING AGENT#
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L6           52 S L4 AND L5
L7       138809 S SURFACTANT?
L8         2663 S L7 (L) (B OR C) OR SP C OR SP B
L9           36 S L8 AND L4
L10       76647 S PHOSPHOLIPID#
L11        4121 S DIPALMITOYLPHOSPHATIDYLCHOLINE OR PHOPHATIDYL?
L12           5 S L11 AND L4
L13          15 S L10 AND L4
L14          16 S L12 OR L13
L15         247 S L8 AND L10
L16         120 S L8 AND L11
L17         304 S L15 OR L16
L18         262 S SPREAD? (2A) AGENT#
L19           4 S L17 AND L18
                SET SFIELD BI
                SET SFIELD OBI
L20         368 S N(S) SUBSTITUT? (S) (G OR GLY OR GLYCINE)
L21           5 S L20 AND L7
L22           0 S PULMONARY AND L20
L23           0 S L18 AND L20
L24          20 S L19 OR L14
L25           8 S L18 AND (L10 OR L11)
L26          24 S L25 OR L24


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L26  ANSWER 1 OF 24  CAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:        2003:429027  CAPLUS
DOCUMENT NUMBER:         139:12276
TITLE:                   Compositions containing lipid crystals for decreasing
                         upper respiratory airway resistance
INVENTOR(S):             Mautone, Alan J.
PATENT ASSIGNEE(S):      Scientific Development and Research, Inc., USA
SOURCE:                  U.S., 13 pp., Cont.-in-part of U.S. 6,156,294.
                         CODEN: USXXAM
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  6
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
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     US 6572841         B1   20030603      US 2000-639739   20000816
     US 6156294         A    20001205      US 1999-450884   19991128
     US 2002090344      A1   20020711      US 2001-11994    20011204
PRIORITY APPLN. INFO.:                  US 1999-450884   A2 19991128
                                        US 2000-639739   A2 20000816
AB   The present invention discloses a method of decreasing airflow resistance
     through the mammalian upper respiratory system by administering an
     aerosolized mixt. of lipid crystals comprised of a mixt. of one or more
     lipids surfactants and one or more spreading agents selected from the
     group consisting of cholesteryl esters, phospholipids, carbohydrates and
     proteins, in powder form, and one or more fluorocarbon propellants,
     through nasal or oral inhalation.  Upon administration, the propellant(s)
     are evapd. from the mixt. and the lipid crystals are deposited upon the
     air/liq. interface resident upon epithelial tissue lining air ways and air
     spaces of said upper respiratory system.  Upon contact of lipid crystals
     with the air/liq. interface, an amorphous spread film is formed thereupon
     substantially decreasing the surface tension of the lining and resulting
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in an increase in vol. of the airways and airspaces. A therapeutically active agent effective in the treatment of upper respiratory disease is added to the mixt. of lipid crystals and upon administration of the aerosol mixt., the amorphous spread film formed thereby carries the therapeutically active agent throughout the epithelium of upper respiratory system so as to improve airflow through the upper respiratory system by both reducing surface tension of the epithelial lining and by effectively treating the inflammatory process. For example, an aerosolized drug delivery system for nasal administration was prepd. by mixing dipalmitoylphosphatidylcholine (DPPC) and cholesteryl palmitate (CP) in a ratio of 200:1, resp., to obtain a carrier, and adding 160 mg of phenylephrine to 995 mg of the carrier. Five grams of the resultant mixt. (DPPC/CP/phenylephrine) was suspended in 55 g of trichloromonofluoromethane (P11) as the first propellant, subdivided into 30 mL, and placed into plastic-coated glass bottles with metered dose valves after which 40 g of the second propellant, dichlorodifluoromethane (P12), was passed.

IC ICM A61L009-02
ICS A61K009-72; A61K009-12

NCL 424045000; 424040000; 424047000; 424450000

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 2

ST lipid crystal aerosol inhalant powder respiratory resistance; surfactant **spreading agent** lipid crystal respiratory resistance

IT **Surfactant** proteins (pulmonary)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**SP-B**; aerosol compns. contg. lipid crystals for decreasing upper respiratory airway resistance)

IT **Surfactant** proteins (pulmonary)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**SP-C**; aerosol compns. contg. lipid crystals for decreasing upper respiratory airway resistance)

IT Albumins, biological studies
Carbohydrates, biological studies
Cardiolipins
Corticosteroids, biological studies
Lipids, biological studies
Lysophospholipids
Nucleic acids
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylglycerols
Phosphatidylinositols
Phospholipids, biological studies
Plasmalogens
Proteins
Sphingomyelins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aerosol compns. contg. lipid crystals for decreasing upper respiratory airway resistance)

IT 50-99-7, D-Glucose, biological studies 57-48-7, D-Fructose, biological studies 57-88-5D, Cholesterol, esters 59-23-4, D-Galactose, biological studies 59-42-7, Phenylephrine 61-76-7, Phenylephrine hydrochloride 63-89-8, **Dipalmitoylphosphatidylcholine** 114-07-8, Erythromycin 303-43-5, Cholesteryl oleate 378-44-9, Betamethasone 601-34-3, Cholesteryl palmitate 2152-44-5, Betamethasone valerate 5593-20-4, Betamethasone dipropionate 17162-39-9, Phenylephrine tartrate 26787-78-0, Amoxicillin 35602-69-8, Cholesteryl stearate 58001-44-8, Clavulanic acid 59277-89-3, Acyclovir 74469-00-4, Augmentin 83905-01-5, Zythromax 534599-12-7, Pneumogalactan

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aerosol compns. contg. lipid crystals for decreasing upper respiratory airway resistance)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:323828 CAPLUS
DOCUMENT NUMBER: 138:286862
TITLE: Plant compounded carbon nutrient solution
INVENTOR(S): Ben, Guiying; Han, Fa; Shi, Shengbo
PATENT ASSIGNEE(S): Xibei Research Inst. of High-altitude Organism, Chinese Academy of Sciences, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1360830	A	20020731	CN 2000-137123	20001228

PRIORITY APPLN. INFO.: CN 2000-137123 20001228
AB The title soln. is composed of monohydric alc. 10-90, amino acids 8-50, phospholipid 1-20, spreading agent 1-20, and trace element and water. The application of the nutrient soln. can accelerate plant's photosynthesis.
IC ICM A01N059-00
ICS A01N059-26
CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
IT Alcohols, biological studies
Amino acids, biological studies
Phospholipids, biological studies
Trace elements, biological studies
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(compounded carbon nutrient soln.)
IT Materials
(**spreading agents**; compounded carbon nutrient soln.)

L26 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:129326 CAPLUS
DOCUMENT NUMBER: 138:142523
TITLE: Composition and method for treatment of otitis externa
INVENTOR(S): Mautone, Alan J.
PATENT ASSIGNEE(S): Scientific Development and Research, Inc., USA
SOURCE: U.S., 13 pp., Cont.-in-part of U.S. 6,156,294.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6521213	B1	20030218	US 2000-639730	20000816
US 6156294	A	20001205	US 1999-450884	19991128
US 2002076383	A1	20020620	US 2001-11626	20011211

PRIORITY APPLN. INFO.: US 1999-450884 A2 19991128
US 2000-639730 A2 20000816

AB The present invention discloses a method of increasing external auditory tube patency while simultaneously preventing the occurrence of otitis externa comprising administration of an aerosolized mixt. of lipid crystals comprised of a mixt. of one or more lipids surfactants and one or more spreading agents selected from the group consisting of cholesteryl esters, phospholipids, carbohydrates, and proteins, in powder form, and one or more fluorocarbon propellants directly to the external auditory tube via the external auditory meatus. Upon administration, the propellant(s) are evapd. from the mixt. and the lipid crystals are deposited upon an air/liq. interface resident upon epithelial tissue lining the external auditory tube. Upon contact of said lipid crystals with the epithelial lining, an amorphous spread film is formed thereupon to form a barrier against exogenous water while simultaneously and substantially decreasing the surface tension of said lining to increase the patency thereof. In a second preferred embodiment, a therapeutically active agent effective in the treatment of otitis externa is added to the mixt. of lipid crystals and upon administration of said aerosol mixt., the amorphous spread film formed thereby carries said therapeutically active agent throughout the epithelium of the outer ear canal to improve the patency thereof by both reducing surface tension of said epithelial lining and by efficiently treating the inflammatory process.

IC ICM A61L009-04
ICS A61M011-00

NCL 424045000; 514951000; 514956000; 514958000; 128200230

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 2

IT **Phospholipids**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dialkyl; treatment of otitis externa with aerosol formulation contg. medicaments such as antibiotics, corticosteroids, antivirals, and nucleic acids)

IT **Phospholipids**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phosphonolipids, diether; treatment of otitis externa with aerosol formulation contg. medicaments such as antibiotics, corticosteroids, antivirals, and nucleic acids)

IT Materials
(**spreading agents**; treatment of otitis externa with aerosol formulation contg. medicaments such as antibiotics, corticosteroids, antivirals, and nucleic acids)

IT Albumins, biological studies
Lysophospholipids
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylinositols
Phospholipids, biological studies
Plasmalogens
Sphingomyelins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment of otitis externa with aerosol formulation contg. medicaments such as antibiotics, corticosteroids, antivirals, and nucleic acids)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:4142 CAPLUS
DOCUMENT NUMBER: 139:655
TITLE: Characterization of the surface activity of a synthetic surfactant with albumin

AUTHOR(S): Otsubo, Eiji; Takei, Tsunetomo
CORPORATE SOURCE: Research Center, Mitsubishi Pharma, Inc., Chiba, 292-0812, Japan
SOURCE: Biological & Pharmaceutical Bulletin (2002), 25(12), 1519-1523
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We previously reported that a human analog of pulmonary surfactant protein-C (SP-C), SP-CL16 (6-28), with 23 residues was the most active analog in a reconstituted lipid mixt. and had the shortest chain among the poly leucine analogs examd. In this study, we verified the influence of albumin, a component of serum, on the surface activity of surfactant. Surface activity was measured using the Langmuir-Wilhelmy surface balance (WSB), pulsating bubble surfactometer (PBS), and stable microbubble test (MBT). The surface activity of synthetic lung surfactant (SLS) was only slightly influenced by albumin (0.1-10 mg/mL) as compared with that of a ternary mixt. of phospholipids. The ternary mixt. of phospholipids showed a decrease in surface activity due to albumin. In particular, SLS did not show interaction of surface activity with albumin in vitro (WSB, PBS, and MBT). In contrast, dipalmitoylphosphatidylcholine-phosphatidylglycerol-palmitic acid had significantly weaker surface activity in the presence of albumin. Surfactant-TA showed interaction of surface activity with albumin in the MBT. The no. of stable microbubble increased in the presence of albumin at a concn. of 0.1 mg/mL.

CC 1-9 (Pharmacology)

IT **Phospholipids**, properties
RL: PRP (Properties)
(ternary mixt.; characterization of surface activity of a synthetic surfactant SP-CL16 (6-28) with albumin)

IT Phosphatidylglycerols
RL: PRP (Properties)
(ternary **phospholipid** mixt.; characterization of surface activity of a synthetic surfactant SP-CL16 (6-28) with albumin)

IT 108778-82-1, Surfactant-TA **170984-50-6**, SP-CL16 (6-28)
RL: PRP (Properties)
(characterization of surface activity of a synthetic surfactant SP-CL16 (6-28) with albumin)

IT 57-10-3, Palmitic acid, properties 63-89-8, **Dipalmitoylphosphatidylcholine**
RL: PRP (Properties)
(ternary **phospholipid** mixt.; characterization of surface activity of a synthetic surfactant SP-CL16 (6-28) with albumin)

IT **170984-50-6**, SP-CL16 (6-28)
RL: PRP (Properties)
(characterization of surface activity of a synthetic surfactant SP-CL16 (6-28) with albumin)

RN 170984-50-6 CAPLUS

CN L-Leucine, L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-(9CI) (CA INDEX NAME)

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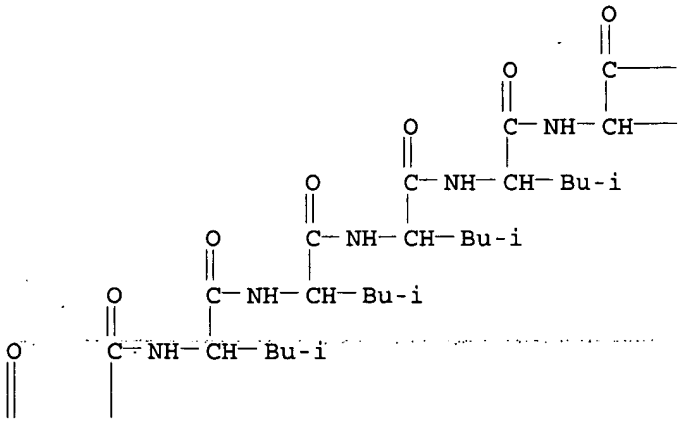

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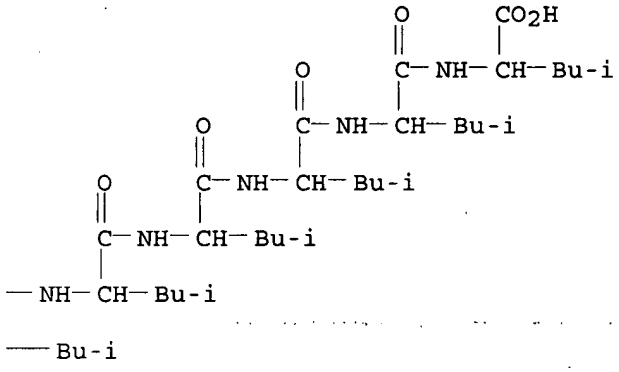

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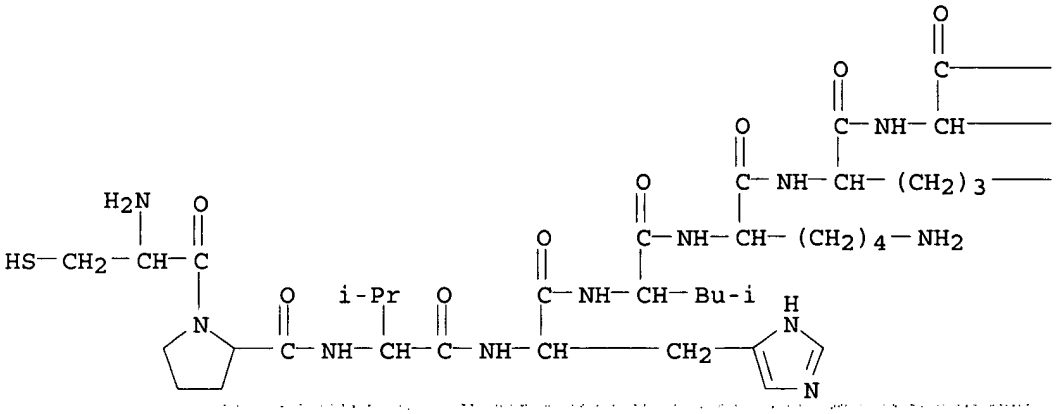

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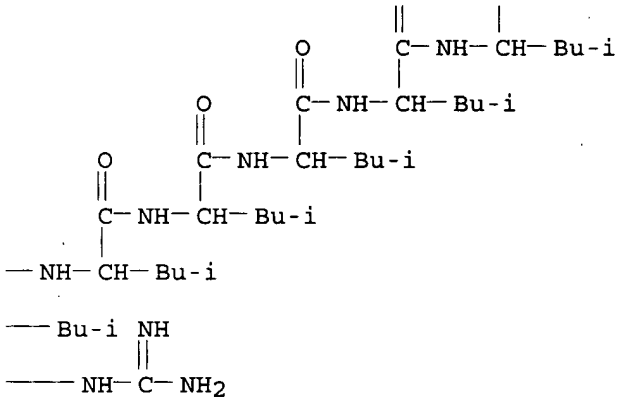


REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:858521 CAPLUS
DOCUMENT NUMBER: 138:395860
TITLE: Effects of the human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**
AUTHOR(S): Otsubo, Eiji; Takei, Tsunetomo
CORPORATE SOURCE: Research Center, Mitsubishi Pharma, Inc., Chiba, 292-0812, Japan
SOURCE: Biological & Pharmaceutical Bulletin (2002), 25(10), 1303-1306
CODEN: BPBLEO; ISSN: 0918-6158

PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We previously reported that a human analog of pulmonary surfactant protein-C (SP-C), SP-CL16(6-28), with 23 residues was the most active analog in a reconstituted lipid mixt. and had the shortest chain among the poly-leucine-analogs examd. There has been little research on the chem. components of synthetic lung surfactants (SLSs). In the present study, we attempted to compare SLS with various phospholipids in surface activity. That is, SP-CL16(6-28) plus various phosphatidylglycerols (PG) were tested for surface activity in a Langmuir-Wilhelmy surface balance (WSB) app. and pulsating bubble surfactmeter (PBS). Further, SLSs were examd. for biol. properties using an animal model of surfactant deficiency, infant respiratory distress syndrome (IRDS), in vivo. Palmitoyl-oleoyl-phosphatidylglycerol (POPG)-SLS exhibited min. and max. surface tensions of 1.7 mN/m and 28.6 mN/m in WSB and 8.5 mN/m and 36.2 mN/m in PBS, resp. Moreover, in the IRDS model, POPG-SLS remarkably improved the lung vol. (LV) of a premature lagomorph fetus at LV30 cmH2O and LV5 cmH2O. That is, a significant improvement equal to the LV of a fullterm fetus was obsd. The level of LV exhibited respiratory improvement equiv. to surfactant-TA. SLS seemed comparable in surface activity with Surfacten (Surfactant-TA), a modified surfactant prepn. which has been used for the treatment of RDS.

CC 1-9 (Pharmacology)

ST lung pulmonary surfactant protein **phospholipid** infant respiratory distress syndrome

IT Surfactant proteins (pulmonary)
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(SP-C; effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT Human
Pulmonary surfactant
Respiration, animal
(effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT **Phospholipids**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT Phosphatidylglycerols
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(egg yolk; effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT Respiratory distress syndrome
(newborn; effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT Newborn
(premature; effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT **170984-50-6P**, SP-CL 16(6-28)
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

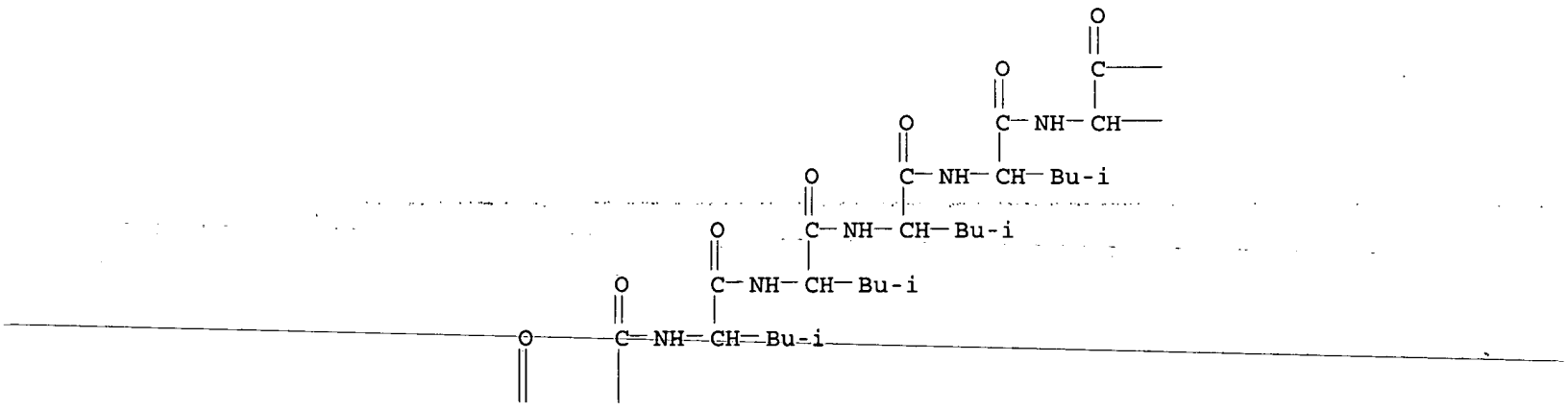
(Uses)
(effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT 57-10-3, Palmitic acid, biological studies 2644-64-6, **Dipalmitoylphosphatidylcholine** 4537-77-3, Dipalmitoylphosphatidylglycerol 4537-78-4, Distearoylphosphatidylglycerol 61361-72-6, Dimyristoylphosphatidylglycerol 63644-55-3, Dilauroylphosphatidylglycerol 81490-05-3, Palmitoyl-oleoyl-phosphatidylglycerol 108778-82-1, Surfacten
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

IT **170984-50-6P**, SP-CL 16(6-28)
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(effects of human pulmonary surfactant protein-C (SP-C), SP-CL16(6-28) on surface activities of surfactants with various **phospholipids**)

RN 170984-50-6 CAPLUS
CN L-Leucine, L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-(9CI) (CA INDEX NAME)

PAGE 1-B



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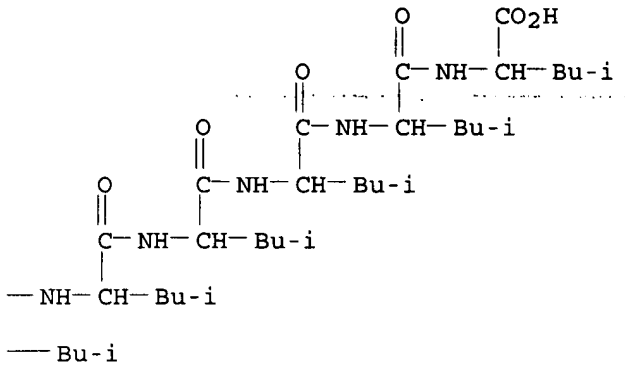

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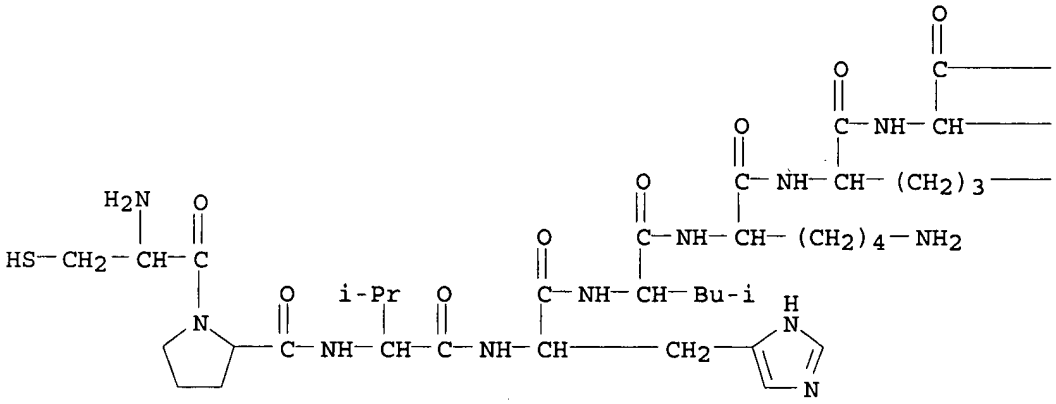
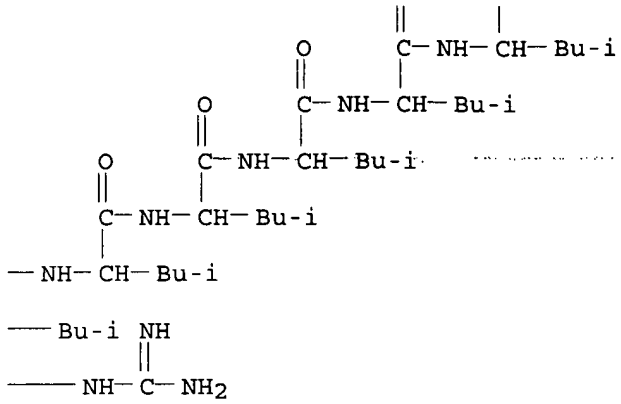


PAGE 2-B



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:771892 CAPLUS
DOCUMENT NUMBER: 139:63024
TITLE: Surfactant with SP-B and SP-C Analogues Improves Lung Function in Surfactant-Deficient Rats
AUTHOR(S): Walther, Frans J.; Hernandez-Juviel, Jose M.; Mercado, Pamela E.; Gordon, Larry M.; Waring, Alan J.
CORPORATE SOURCE: Department of Pediatrics, Harbor-UCLA Medical Center, Harbor-University of California Los Angeles Research & Education Institute, Torrance, CA, USA
SOURCE: Biology of the Neonate (2002), 82(3), 181-187
CODEN: BNEOBV; ISSN: 0006-3126
PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The use of mammalian lung surfactant exts. has sharply reduced mortality and morbidity from respiratory distress syndrome in premature infants. Synthesis of surfactant protein B and C (SP-B and SP-C) analogs may lead the way to a synthetic surfactant prepn. Dimeric SP-B1-25 (dSP-B1-25) is based on the N-terminal domain of human SP-B and SP-Cfc is a modified human SP-C in which a single phenylalanine is substituted for a palmitoylated cysteine residue in the N-terminal segment (Phe-4 > Cys-4 variant). We tested the effects of synthetic surfactants with 1 or 2% dSP-B1-25 and 1% SP-Cfc on lung function in surfactant-deficient rats. Four exptl. surfactant prepns. were prepd. by mixing 1% dSP-B1-25, 2% dSP-B1-25, 1% dSP-B1-25 + 1% SP-Cfc, and 2% dSP-B1-25 + 1% SP-Cfc with phospholipids (PL). PL and Survanta, a bovine lung ext., were controls. Groups of 8 rats were ventilated, lavaged until surfactant deficiency, and treated with 100 mg/kg surfactant. Arterial blood gas values and dynamic compliance were measured every 15 min and after 2 h of ventilation, the rats were killed and pressure-vol. curves performed. Oxygenation improved quickly after instillation of surfactant with synthetic peptides and Survanta. Oxygenation and lung vols. were consistently higher in the 2% than in the 1% dSP-B1-25 groups. Addn. of 1% SP-Cfc to the synthetic surfactants further improved oxygenation and lung vol., but to a lesser extent than increasing the dSP-B1-25 content from 1 to 2%. These data indicate that improvements in oxygenation and lung vol. in lavaged rats are dependent on the concn. of dSP-B1-25 in the surfactant prepn. and that the presence of SP-Cfc has a relative minor effect on these parameters.

CC 1-9 (Pharmacology)
IT **Phospholipids**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surfactant with SP-B and SP-C analogs improves lung function in surfactant-deficient rats)
IT **548800-97-1** 551945-25-6
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surfactant with SP-B and SP-C analogs improves lung function in surfactant-deficient rats)
IT **548800-97-1**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(surfactant with SP-B and SP-C analogs improves lung function in surfactant-deficient rats)
RN 548800-97-1 CAPLUS
CN L-Leucine, L-phenylalanylglycyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-phenylalanyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valylglycyl-L-alanyl-L-leucyl-L-leucyl-L-methionylglycyl- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:522422 CAPLUS
DOCUMENT NUMBER: 137:83675
TITLE: Composition and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals
INVENTOR(S): Mautone, Alan J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of U.S. Ser. No. 639,739.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002090344	A1	20020711	US 2001-11994	20011204
US 6156294	A	20001205	US 1999-450884	19991128
US 6572841	B1	20030603	US 2000-639739	20000816
WO 2003047522	A2	20030612	WO 2002-US38368	20021129

W: CA, CN, JP, MX
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR

PRIORITY APPLN. INFO.: US 1999-450884 A2 19991128
US 2000-639739 A2 20000816
US 2001-11994 A 20011204

AB A compn., process and method is disclosed of decreasing mammalian upper respiratory system airway resistance by administering an aerosolized mixt. of lipid crystals comprised of a mixt. of one or more lipid surfactants and one or more spreading agents selected from the group consisting of

sterols, lipids, fatty acids, cholesteryl esters, phospholipids, carbohydrates, and proteins, in powder form, and one or more propellants, in which the lipid surfactants and spreading agents are not sol., through a mammalian external airway orifice. Upon administration, the propellant(s) are evapd. from the mixt. and the lipid crystals are deposited upon the air/liq. interface resident upon the epithelial lining of the upper respiratory system forming an amorphous spread film thereupon substantially decreasing the resistance to air flow through said upper respiratory system. In a second preferred embodiment, a therapeutically active agent effective in the treatment of upper respiratory disease is added to the mixt. of lipid crystals and upon administration of said aerosol mixt., the amorphous spread film formed thereby carries said therapeutically active agent throughout the tissues of the upper respiratory system. In an alternate preferred embodiment, the afore-mentioned redn. of surface tension and delivery of therapeutically active agents is provided by a mixt. of lipid crystals comprised of surfactant(s), therapeutically active agents and a propellant in which such other components are not sol. An aerosol mixt. contained DPPC, cholesteryl palmitate, and betamethasone suspended in trichloromonofluoromethane propellant. A second propellant, dichlorodifluoromethane was also used.

IC ICM A61K009-14
NCL 424046000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT **Surfactant** proteins (pulmonary)
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**SP-B**; compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)
IT **Surfactant** proteins (pulmonary)
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**SP-C**; compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)
IT Albumins, biological studies
Carbohydrates, biological studies
Cardiolipins
Fatty acids, biological studies
Lipids, biological studies
Lysophospholipids
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylglycerols
Phosphatidylinositols
Phosphatidylserines
Phospholipids, biological studies
Plasmalogens
Proteins
Sphingomyelins
Sterols
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)
IT **Phospholipids**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dialkyl; compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)

IT **Phospholipids**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phosphonolipids, diether; compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)

IT Materials
(**spreading agents**; compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)

IT 50-99-7, D-Glucose, biological studies 57-10-3, Palmitic acid, biological studies 57-48-7, Fructose, biological studies 57-87-4, Ergosterol 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, esters 59-23-4, Galactose, biological studies 59-42-7, Phenylephrine 67-97-0, Cholecalciferol 112-80-1, Oleic acid, biological studies 114-07-8, Erythromycin 303-43-5, Cholesteryl oleate 378-44-9, Betamethasone 601-34-3, Cholesteryl palmitate 2644-64-6, 1,2 **Dipalmitoylphosphatidylcholine** 26787-78-0, Amoxicillin 35602-69-8, Cholesteryl stearate 74469-00-4, Augmentin 83905-01-5
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compn. and method for decreasing upper respiratory airway resistance using aerosolized lipid crystals)

L26 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:409120 CAPLUS
DOCUMENT NUMBER: 136:406879
TITLE: Lipid surfactant composition and method for treatment of otitis media
INVENTOR(S): Mautone, Alan J.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U. S. Ser. No. 639,682.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002064503	A1	20020530	US 2001-11344	20011204
US 6156294	A	20001205	US 1999-450884	19991128
US 6616913	B1	20030909	US 2000-639682	20000816
WO 2003047521	A2	20030612	WO 2002-US38366	20021129
WO 2003047521	A3	20030918		

W: CA, CN, JP, MX
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR

PRIORITY APPLN. INFO.: US 1999-450884 A1 19991128
US 2000-639682 A2 20000816
US 2001-11344 A 20011204

AB A process, compn. and method for increasing and enhancing mammalian Eustachian tube lumen patency and pressure equalization performance is disclosed wherein an aerosolized mixt. of lipid crystals comprised of a mixt. of one or more lipid surfactants and one or more spreading agents selected from the group consisting of sterols, lipids, fatty acids, cholesteryl esters, phospholipids, carbohydrates, and proteins, in powder form, and one or more propellants, in which the lipid surfactants and spreading agents are not sol., are administered through a mammalian airway orifice. Upon administration, the propellant(s) are evapd. from the mixt. and the lipid crystals are deposited within a subject mammalian Eustachian

tube whereupon said lipid crystals come into contact with lumen surfaces of the tube forming an amorphous spread film thereupon substantially decreasing the opening pressure of the lumen. In a second preferred embodiment, a therapeutically active agent effective in the treatment of otitis media is added to the mixt. of lipid crystals and upon administration of said aerosol mixt., the amorphous spread film formed thereby carries said therapeutically active agent through the Eustachian tube to the tissues of the middle ear. In an alternate preferred embodiment, the afore-mentioned redn. of surface tension and delivery of therapeutically active agents is provided by a mixt. of lipid crystals comprised of surfactant(s), therapeutically active agents and a propellant in which such other components are not sol. For example, an aerosolized drug delivery system was prepd. by mixing DPPC and cholesteryl palmitate (CP) (200:1) and to 5 mg of the resultant carrier, 1 .mu.g of betamethasone was added. Then 5 g of this mixt. was suspended in 55 g of the first propellant, trichloromonofluoromethane (P11) and subdivided into 30 mL Wheaton plastic-coated glass bottles with a 20 mm neck finish. Valois metered dose valves were then crimped onto each bottle through which 40 g of the second propellant, dichlorodifluoromethane (P12), was passed. The size of the metering valve can be varied to deliver 1-5.4 mg of the DPPC/CP/betamethasone aerosolized mixt.

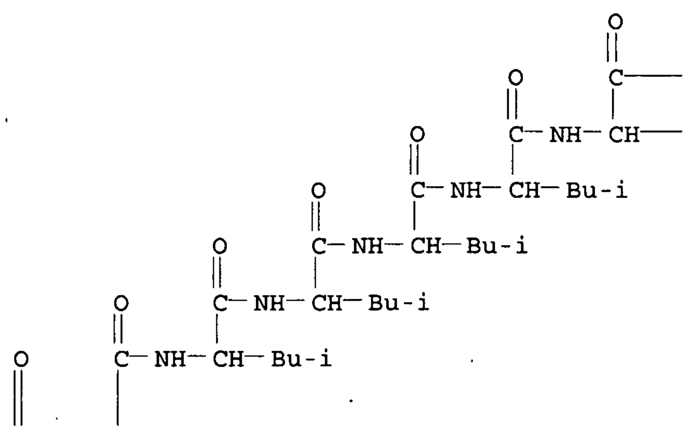
IC ICM A61L009-04
NCL 424045000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT **Surfactant** proteins (pulmonary)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**SP-B**; aerosol powder compn. contg. lipid **surfactants** for treatment of otitis media)
IT **Surfactant** proteins (pulmonary)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**SP-C**; aerosol powder compn. contg. lipid **surfactants** for treatment of otitis media)
IT Albumins, biological studies
Carbohydrates, biological studies
Cardiolipins
Fatty acids, biological studies
Lipids, biological studies
Lysophospholipids
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylglycerols
Phosphatidylinositols
Phosphatidylserines
Phospholipids, biological studies
Plasmalogens
Proteins
Sphingomyelins
Sterols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aerosol powder compn. contg. lipid surfactants for treatment of otitis media)
IT **Phospholipids**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phosphonolipids; aerosol powder compn. contg. lipid surfactants for treatment of otitis media)
IT Materials
(**spreading agents**; aerosol powder compn. contg. lipid surfactants for treatment of otitis media)
IT 50-99-7, Glucose, biological studies 57-10-3, Palmitic acid, biological

studies 57-48-7, Fructose, biological studies 57-87-4, Ergosterol 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, esters 59-23-4, Galactose, biological studies 67-97-0, Cholecalciferol 75-69-4, Trichloromonofluoromethane 75-71-8, Dichlorodifluoromethane 112-80-1, Oleic acid, biological studies 124-38-9, Carbon dioxide, biological studies 303-43-5, Cholesteryl oleate 601-34-3, Cholesteryl palmitate 2644-64-6, 1,2-**Dipalmitoylphosphatidylcholine** 6556-12-3, D-Glucuronic acid 35602-69-8, Cholesteryl stearate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aerosol powder compn. contg. lipid surfactants for treatment of otitis media)

L26 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:879794 CAPLUS
DOCUMENT NUMBER: 136:232542
TITLE: Synthesis, purification and surface activities of the human pulmonary surfactant protein-C (SP-C) analog, SP-CL16 (6-28)
AUTHOR(S): Otsubo, Eiji; Takei, Tsunetomo; Nomura, Masato
CORPORATE SOURCE: Research Center, Mitsubishi-Tokyo Pharmaceuticals, Inc., Chiba, 292-0812, Japan
SOURCE: Biological & Pharmaceutical Bulletin (2001), 24(12), 1362-1365
CODEN: BPBLEO; ISSN: 0918-6158
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We previously reported that a human analog of pulmonary surfactant protein-C (SP-C), SP-CL16 (6-28), with 23 residues was the most active analog in a reconstituted lipid mixt. and had the shortest chain among the poly-leucine-analogs examd. In the present study, we examd. a new method of prepg. this analog, i.e., stepwise solid-phase synthesis employing the Fmoc method followed by centrifugal partition chromatog. (CPC) using an n-hexane/CH3OH/H2O/trifluoroacetic acid (TFA) (1000: 1000: 1: 2, vol./vol.) solvent system according to the descending method. The synthetic peptides were identified by matrix-assisted laser desorption ionization time-of-flight (MALDI-TOF) mass spectrometry in search of activity to improve the in vitro surface activity of a ternary lipid mixt. composed of dipalmitoylphosphatidylcholine, egg-phosphatidylglycerol and palmitic acid (75: 25: 10, wt./wt.) in a Langmuir-Wilhelmy surface balance. SP-CL16 (6-28) seemed comparable in surface activity with Surfacten (Surfactant-TA), a modified surfactant prepn. which has been used for the treatment of respiratory distress syndrome.
CC 34-4 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 6, 14, 66
IT **170984-50-6P**
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(solid phase peptide synthesis and surface activities of the human pulmonary surfactant protein-C analog, SP-CL16)
IT 2644-64-6, **Dipalmitoylphosphatidylcholine**
RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
(surface activities of ternary lipid mixt. improved by addn. of SP-CL16)
IT **170984-50-6P**
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation).
(solid phase peptide synthesis and surface activities of the human pulmonary surfactant protein-C analog, SP-CL16)

RN 170984-50-6 CAPLUS
CN L-Leucine, L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl-L-leucyl- (9CI) (CA INDEX NAME)

PAGE 1-B



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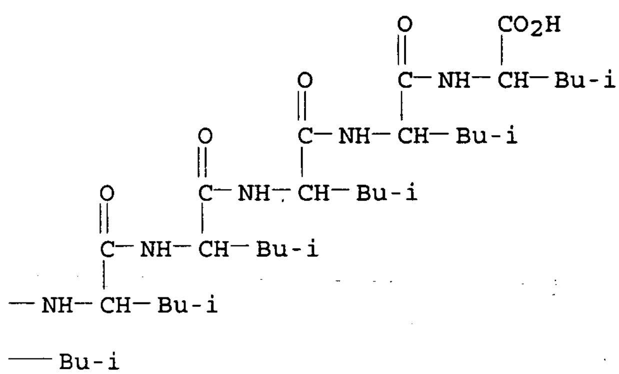

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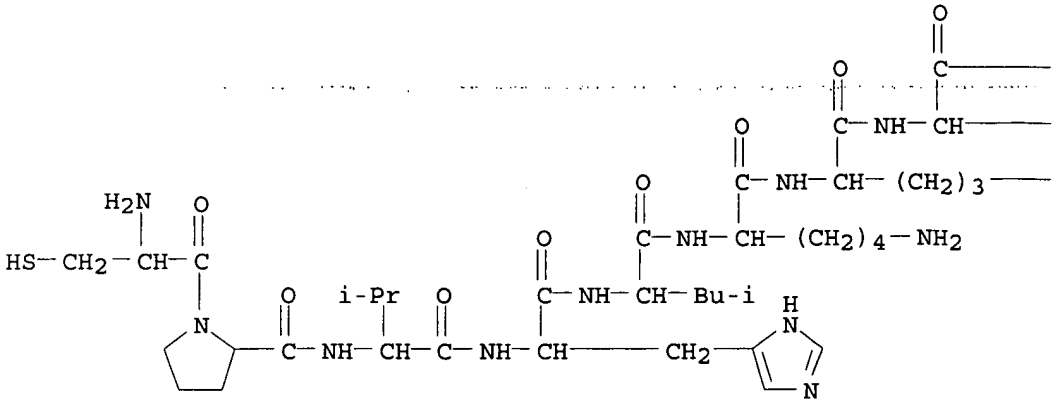

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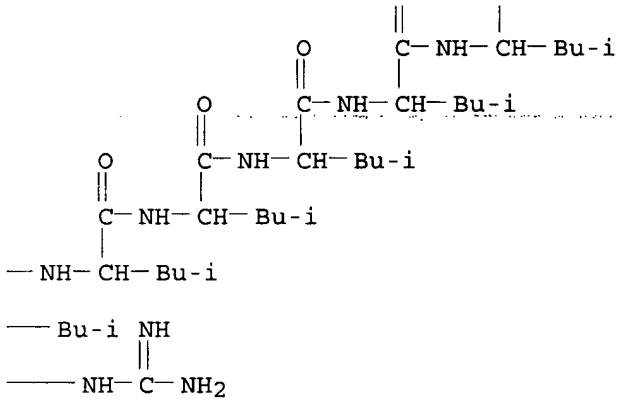


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:638086 CAPLUS
TITLE: Biomimetic, polypeptoid-based **spreading agents** for exogenous lung surfactant replacement: Interactions of surfactant proteins with **phospholipids** at the surface of the lung
AUTHOR(S): Wu, Cindy W.; Lee, Ka Yee C.; Barron, Annelise E.
CORPORATE SOURCE: Chemical Engineering Department, Northwestern University, Evanston, IL, 60208-3120, USA
SOURCE: Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001 (2001), COLL-050. American Chemical Society: Washington, D.

C.
CODEN: 69BUZP
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Delivery of functional lung surfactant (LS) is necessary for the rescue of premature infants with Respiratory Distress Syndrome. Although LS is composed primarily of phospholipids, small amts. of amphipathic surfactant proteins SP-B and SP-C are required for controlling lipid phase behavior at the air-water interface to enable easy breathing. Currently, these proteins are extd. from animals and delivered to infants, introducing risk of viral transmission. Hence, we aim to develop functional, biomimetic spreading agents that are safe, reliable, bioavailable, and cost-effective additives to exogenous lung surfactant. Addnl. we hope to investigate LS protein/lipid interactions. We have synthesized, purified, and performed in vitro testing of a new class of biomimetic spreading agents using N-substituted glycine polymers (-polypeptoids'). Despite similarity to polypeptides, polypeptoids are essentially invulnerable to protease degrdn. We have shown that peptoid-based SP-mimics can adopt stable helixes in soln. Using Langmuir-Wilhelmy balance, fluorescence microscope and pulsating bubble surfactometer, we show that peptoid-based LS formulations have promising biophys. activity and surface morphol.

L26 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:618015 CAPLUS
DOCUMENT NUMBER: 135:200447
TITLE: Polypeptoid pulmonary surfactants
INVENTOR(S): Barron, Annelise E.; Zuckermann, Ronald N.; Wu, Cindy W.
PATENT ASSIGNEE(S): Northwestern University, USA; Chiron Corporation
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060837	A2	20010823	WO 2001-US5145	20010216
WO 2001060837	A3	20011206		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001038442	A5	20010827	AU 2001-38442	20010216
EP 1267904	A2	20030102	EP 2001-910883	20010216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003040468	A1	20030227	US 2001-788308	20010216
JP 2003523348	T2	20030805	JP 2001-560221	20010216

PRIORITY APPLN. INFO.: US 2000-182847P P 20000216
WO 2001-US5145 W 20010216
OTHER SOURCE(S): MARPAT 135:200447
AB The present invention provides spreading agents based on sequence-specific oligomers comprising a peptoid, a peptide-peptoid chimera, a retropeptoid

or a retro(peptoid-peptide) chimera, and methods for using the same, including for the treatment of respiratory distress of the lungs. The spreading agents are sequence-specific oligomers, including retrosequence-specific oligomers, based on a peptide backbone, that are designed as analogs of surfactant protein-B or surfactant protein-C.

IC ICM C07K

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 34

IT **Phospholipids**, biological studies
RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(polypeptoid pulmonary surfactants)

IT Materials
(**spreading agents**; polypeptoid pulmonary surfactants)

IT Proteins, specific or class
RL: PRP (Properties)
(**surfactant**-assocd. protein **B**; polypeptoid pulmonary **surfactants**)

IT Proteins, specific or class
RL: PRP (Properties)
(**surfactant**-assocd. protein **C**; polypeptoid pulmonary **surfactants**)

IT 57-10-3D, Palmitic acid, derivs. 2644-64-6, **Dipalmitoylphosphatidylcholine**
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(polypeptoid pulmonary surfactants)

IT 125121-91-7, Glycoprotein **SP-B** (human lung clone 7-1 **surfactant**-associated protein moiety reduced)
RL: PRP (Properties)
(unclaimed sequence; polypeptoid pulmonary **surfactants**)

L26 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:911301 CAPLUS
DOCUMENT NUMBER: 134:76366
TITLE: Surfactant protein C esters
INVENTOR(S): Ise, Wolfgang; Gernandt, Walther; Hafner, Dietrich; Ulrich, Wolf-Rudiger; Sturm, Ernst
PATENT ASSIGNEE(S): Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000078810	A1	20001228	WO 2000-EP5031	20000602
W: AE, AL, AU, BA, BG, BR, CA, CN, CZ, EE, GE, HR, HU, ID, IL, IN, JP, KR, LT, LV, MK, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, US, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1192184	A1	20020403	EP 2000-935162	20000602
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003502441	T2	20030121	JP 2001-505568	20000602

PRIORITY APPLN. INFO.: EP 1999-111728 A 19990617

WO 2000-EP5031 W 20000602

OTHER SOURCE(S): MARPAT 134:76366

AB Novel surfactant protein C esters suitable for prepg. pharmaceutical compns. for the treatment of infant respiratory distress syndrome and adult respiratory distress syndrome are described.

IC ICM C07K014-785
ICS A61K038-17; A61P011-00

CC 63-3 (Pharmaceuticals)

IT Fatty acids, biological studies
Phospholipids, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(surfactant protein C esters for treatment of respiratory distress syndromes)

IT **314241-98-0D**, esters
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; surfactant protein C esters for treatment of respiratory distress syndromes)

IT **314241-99-1**
RL: PRP (Properties)
(unclaimed protein sequence; surfactant protein C esters)

IT **314241-98-0D**, esters
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amino acid sequence; surfactant protein C esters for treatment of respiratory distress syndromes)

RN 314241-98-0 CAPLUS

CN Peptide, (Xaa-Gly-Ile-Pro-Cys-Cys-Pro-Val-His-Leu-Lys-Arg-Leu-Leu-Ile-Val-Val-Val-Val-Val-Val-Leu-Ile-Val-Val-Val-Ile-Val-Gly-Ala-Leu-Leu-Met-Gly-Leu) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **314241-99-1**
RL: PRP (Properties)
(unclaimed protein sequence; surfactant protein C esters)

RN 314241-99-1 CAPLUS

CN 1: PN: WO0078810 SEQID: 3 unclaimed protein (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2000:897939 CAPLUS

DOCUMENT NUMBER: 134:61503

TITLE: Surfactant protein C esters for treatment of respiratory distress syndrome

INVENTOR(S): Ulrich, Wolf-Ruediger; Ise, Wolfgang; Sturm, Ernst; Gernandt, Walther; Haefner, Dietrich

PATENT ASSIGNEE(S): Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany

SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19927764	A1	20001221	DE 1999-19927764	19990617

PRIORITY APPLN. INFO.: DE 1999-19927764 19990617
OTHER SOURCE(S): MARPAT 134:61503
AB New surfactant protein C esters are described which are suitable for the prodn. of pharmaceutical compns. for the treatment of respiratory distress syndrome of premature infants and adults.
IC ICM C07K014-435
ICS A61K038-17
CC 63-3 (Pharmaceuticals)
IT Fatty acids, biological studies
Phospholipids, biological studies
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(surfactant protein C esters for treatment of respiratory distress syndrome)
IT **174663-20-8P**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(surfactant protein C esters for treatment of respiratory distress syndrome)
IT **174663-20-8P**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(surfactant protein C esters for treatment of respiratory distress syndrome)
RN 174663-20-8 CAPLUS
CN Peptide, (Gly-Ile-Pro-Xaa-Xaa-Pro-Val-His-Leu-Lys-Arg-Leu-Leu-Ile-Val-Val-Val-Val-Val-Val-Val-Leu-Ile-Val-Val-Val-Ile-Val-Gly-Ala-Leu-Leu-Xaa-Gly-Leu) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:372037 CAPLUS
DOCUMENT NUMBER: 131:4504
TITLE: Spread containing **phospholipids** and fatty acid esters
INVENTOR(S): Kimura, Osamu; Tajiri, Asuka; Shiinoki, Yasuhiko; Azuma, Masayuki
PATENT ASSIGNEE(S): Snow Brand Milk Products Co., Ltd., Japan
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9927797	A1	19990610	WO 1998-JP5418	19981202
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 968655	A1	20000105	EP 1998-957119	19981202

R: DE, GB, NL
JP 3459655 B2 20031020 JP 1999-530605 19981202
US 6190721 B1 20010220 US 1999-355866 19990803
PRIORITY APPLN. INFO.: JP 1997-332998 A 19971203
WO 1998-JP5418 W 19981202
AB A spread contg. phospholipids is prepd.; the proportion of the oil phase is 60 % by wt. or less, and the elec. conductance at 36.degree. increases .gtoreq. 0.2 mS/cm in 300 s. The spread is stable and rapidly sol. in the mouth.
IC ICM A23D007-015
CC 17-6 (Food and Feed Chemistry)
ST food spread **phospholipid** fatty acid ester
IT Fatty acids, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(esters; food spread contg. **phospholipids** and fatty acid esters)
IT **Phospholipids**, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(food spread contg. **phospholipids** and fatty acid esters)
IT Monoglycerides
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(food spread contg. **phospholipids** and fatty acid esters and)
IT Emulsifying **agents**
(food **spread** contg. **phospholipids** and fatty acid esters as)
IT Food
(spreads; contg. **phospholipids** and fatty acid esters)
IT 141-22-0D, Ricinoleic acid, esters with polyglycerin 25618-55-7D, Polyglycerin, esters with ricinoleic acid
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(food spread contg. **phospholipids** and fatty acid esters as)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:452045 CAPLUS
DOCUMENT NUMBER: 129:197827
TITLE: Synthetic peptide-containing surfactants. Evaluation of transmembrane versus amphipathic helixes and surfactant protein C poly-valyl to poly-leucyl substitution
AUTHOR(S): Nilsson, Gunhild; Gustafsson, Magnus; Vandenbussche, Guy; Veldhuizen, Edwin; Griffiths, William J.; Sjovall, Jan; Haagsman, Henk P.; Ruysschaert, Jean-Marie; Robertson, Bengt; Curstedt, Tore; Johansson, Jan
CORPORATE SOURCE: Department of Clinical Chemistry, Karolinska Institutet at Karolinska and Danderyd Hospital, Stockholm, Swed.
SOURCE: European Journal of Biochemistry (1998), 255(1), 116-124
CODEN: EJBCAI; ISSN: 0014-2956
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pulmonary surfactant contains two hydrophobic proteins, SP-B and SP-C. With the aim of identifying synthetic SP-B and SP-C substitutes for replacement therapy of respiratory distress syndromes, we have studied two transmembrane peptides and two amphipathic peptides that are located in the plane of a phospholipid bilayer. One amphipathic peptide was designed

by changing the amino acid sequence, but not the compn. or size, of the 21-residue peptide KL4. This peptide, designated KL2.3 from its spacing of nonpolar and polar residues, exhibited similar .alpha.-helical content as KL4 but was oriented along a phospholipid bilayer plane, in contrast to the transmembrane orientation of KL4 in the same environment. The second amphipathic peptide analyzed was succinyl-LLEKLLEWLK-amide (WMAP10). KL4 more efficiently accelerated the spreading of a mixt. of 1,2-dipalmitoyl-sn-glycero-3-phosphocholine (Pam2-GroPCho)/phosphatidylglycerol (PtdGro)/palmitic acid (PamOH), 68:22:9 (by mass), at an air/water interface than did any of the amphipathic peptides. Similarly, KL4, but not KL2.3, when present in an interfacial monolayer composed of Pam2GroPCho/1-palmitoyl-2-oleoyl-sn-glycero-3-phosphoglycerol, 7:3 (by mass), increased lipid insertion from subphase vesicles. An SP-C analog, SP-C(Leu), with all helical valyl residues in native SP-C replaced with Leu and the palmitoylcysteines at positions 5 and 6 replaced with Ser, but otherwise with essentially the same primary structure as the native peptide, was analyzed. SP-C(Leu) exhibited similar .alpha.-helical content as native SP-C and a transmembrane orientation and, in contrast to poly-valyl-contg. synthetic peptides, it folds into a helical conformation after acid-induced denaturation. SP-C(Leu) accelerated the spreading of Pam2GroPCho/PtdGro/PamOH, 68:22:9 (by mass), almost identically to native SP-C, and lowered the surface tension during rapid cyclic film compressions in a pulsating bubble surfactometer to near zero and 43 mN/m at min. and max. bubble size, resp. Airway instillation of 2% (by mass) SP-C(Leu) combined with Pam2GroPCho/PtdGro/PamOH in preterm rabbit fetuses improved dynamic lung compliance by about 30% compared with untreated controls.

CC 1-9 (Pharmacology)

IT Phosphatidylglycerols
Phospholipids, biological studies
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(evaluation of transmembrane vs. amphipathic helixes and surfactant protein C poly-valyl to poly-leucyl substitution as pulmonary surfactants for therapy of respiratory distress syndrome)

IT 123792-35-8, WMAP 10 **136955-87-8**, Lipoprotein SP-C (human pulmonary surfactant-associated reduced) 138531-07-4, KL4 212006-33-2 212058-76-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of transmembrane vs. amphipathic helixes and surfactant protein C poly-valyl to poly-leucyl substitution as pulmonary surfactants for therapy of respiratory distress syndrome)

IT **136955-87-8**, Lipoprotein SP-C (human pulmonary surfactant-associated reduced)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(evaluation of transmembrane vs. amphipathic helixes and surfactant protein C poly-valyl to poly-leucyl substitution as pulmonary surfactants for therapy of respiratory distress syndrome)

RN 136955-87-8 CAPLUS

CN Lipoprotein SP-C (human pulmonary surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:291559 CAPLUS
DOCUMENT NUMBER: 129:90193
TITLE: Protein composition of synthetic surfactant affects gas exchange in surfactant-deficient rats
AUTHOR(S): Walther, Frans J.; Hernandez-Juviel, Jose; Bruni, Roberta; Waring, Alan J.
CORPORATE SOURCE: Department of Pediatrics, Charles R. Drew University of Medicine and Science, Los Angeles, CA, 90059, USA
SOURCE: Pediatric Research (1998), 43(5), 666-673
CODEN: PEREBL; ISSN: 0031-3998
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Synthetic surfactant peptides offer an opportunity to standardize the protein compn. of surfactant. We tested the effect of phospholipids (PL) with synthetic full-length SP-B1-78 (B), mutant B (Bser), KL4 peptide (UCLA-KL4), and palmitoylated SP-C1-35 (C) on oxygenation and lung function in a surfactant-deficient rat model. Sixty-four adult rats were ventilated with 100% oxygen, a tidal vol. of 7.5 mL/kg, and a rate of 60/min. Their lungs were lavaged with saline until the arterial Po2 dropped below 80 torr, when 100 mg/kg surfactant was instilled. Surfactant prepns. included: PL (PL surfactant), PL + 3% B (B surfactant), PL + 3% B and 1% C (BC surfactant), PL + 3% UCLA-KL4 (KL4 surfactant), PL + 3% Bser (Bser surfactant), and PL + 3% B and 1% UCLA-KL4 (BKL4 surfactant). Sixty minutes after surfactant instillation, pos. end-expiratory pressure was applied for 5 min, and pressure-vol. curves were detd. in situ. The six surfactant prepns. had a min. surface tensions <10 mN/m on a Langmuir/Wilhelmy balance. Instillation of PL, Bser, and BKL4 surfactant increased mean arterial/alveolar Po2 (aADo2) ratios by 50-100% over postlavage values, whereas KL4 surfactant increased aADo2 ratios by 118%, B surfactant by 191%, and BC surfactant by 225%. Lung vols. at 30 cm H2O pressure were highest after treatment with BC surfactant, intermediate after B and KL4 surfactants, and lowest after BKL4, Bser, and PL surfactants. These data suggest that a surfactant prepn. with a combination of synthetic B and C peptides surpasses synthetic B and KL4 surfactants in improving oxygenation and lung compliance in surfactant-deficient rats.

CC 1-9 (Pharmacology)

IT Peptides, biological studies
Phospholipids, biological studies
Proteins, general, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(protein compn. of synthetic surfactant affects gas exchange in surfactant-deficient rats)

IT 117149-12-9 138531-07-4 **209809-81-4D**, palmitoylated
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(protein compn. of synthetic surfactant affects gas exchange in surfactant-deficient rats)

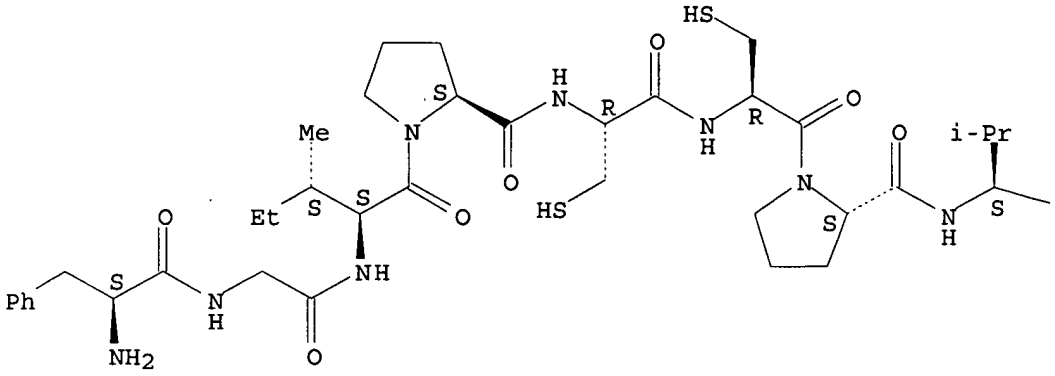
IT **209809-81-4D**, palmitoylated
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(protein compn. of synthetic surfactant affects gas exchange in surfactant-deficient rats)

RN 209809-81-4 CAPLUS
CN Glycine, L-phenylalanylglycyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-alanyl-L-valyl-L-alanyl-L-valyl-L-alanyl-L-valyl-L-alanyl-L-leucyl-L-

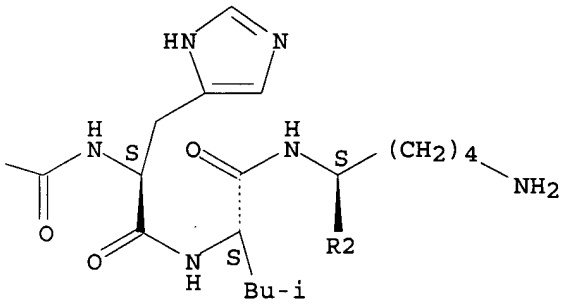
alanyl-L-valyl-L-alanyl-L-valyl-L-alanyl-L-valyl- (9CI) (CA INDEX NAME)

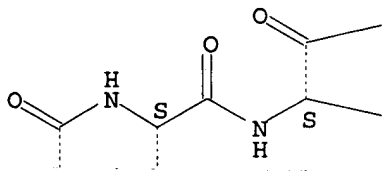
Absolute stereochemistry.

PAGE 1-A

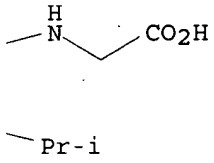


PAGE 1-B

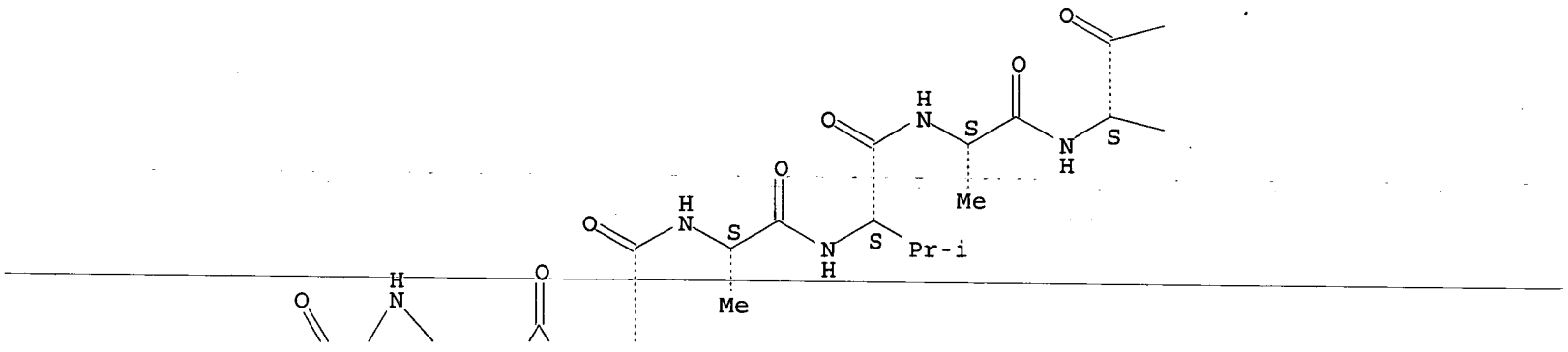




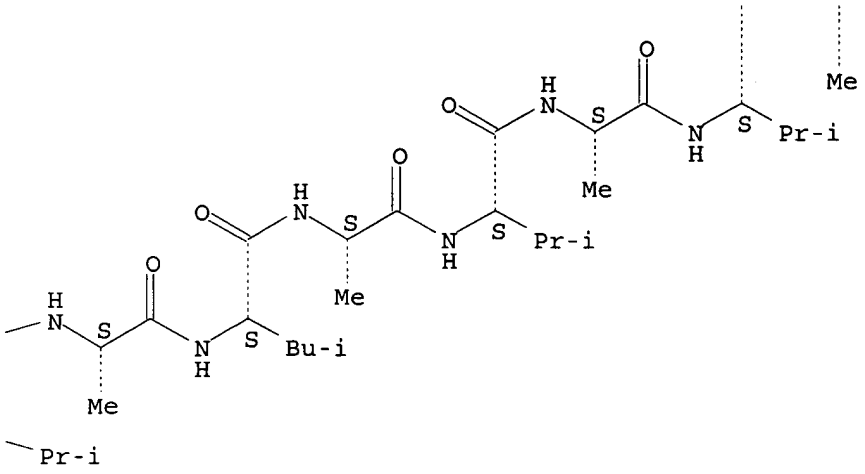
PAGE 1-C



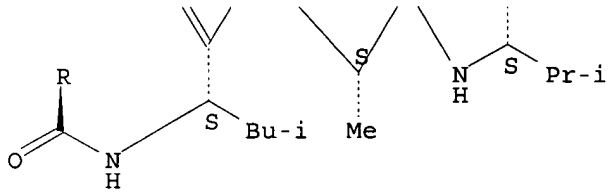
PAGE 2-A

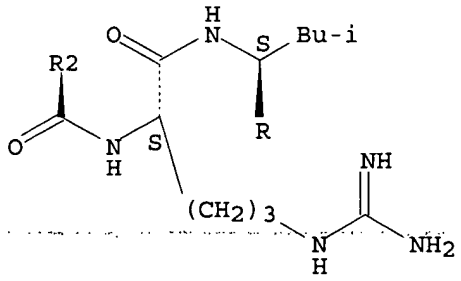


PAGE 2-B



PAGE 3-A





REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:153693 CAPLUS
DOCUMENT NUMBER: 120:153693
TITLE: Prophylactic and remedy for viral diseases in respiratory tract
INVENTOR(S): Kido, Hiroshi; Tashiro, Masato; Sakai, Kentaro; Sekido, Shozaburo
PATENT ASSIGNEE(S): Tokyo Tanabe Co. Ltd., Japan
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9400131	A1	19940106	WO 1993-JP851	19930623
W: AU, CA, KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 06009428	A2	19940118	JP 1992-165875	19920624
AU 9343573	A1	19940124	AU 1993-43573	19930623
AU 690520	B2	19980430		
EP 652011	A1	19950510	EP 1993-913569	19930623
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: JP 1992-165875 19920624
WO 1993-JP851 19930623

AB A prophylactic and a remedy for viral diseases in the respiratory tract contain a pulmonary surfactant as the active ingredient, controlling diseases caused by a virus which contains a glycoprotein which epidemically infects the respiratory tract and proliferates therein.

IC ICM A61K031-685
ICS A61K037-02; A61K037-22; A61K035-42

CC 1-5 (Pharmacology)
Section cross-reference(s): 63

IT Phosphatidylcholines, biological studies
Phospholipids, biological studies
RL: BIOL (Biological study)
(surfactant contg., respiratory infection control by)

IT **Phospholipids**, biological studies
RL: BIOL (Biological study)
(glycero-, choline-contg., surfactant contg., respiratory infection control by)

IT 57-03-4D, acyl derivs. 57-10-3, Palmitic acid, biological studies
2644-64-6 **136955-87-8**
RL: BIOL (Biological study)
(surfactant contg., respiratory viral infection control by)

IT **136955-87-8**
RL: BIOL (Biological study)
(surfactant contg., respiratory viral infection control by)

RN 136955-87-8 CAPLUS

CN Lipoprotein SP-C (human pulmonary surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1992:248177 CAPLUS
DOCUMENT NUMBER: 116:248177
TITLE: Differential sensitivity to fibrinogen inhibition of SP-C-vs. SP-B-based surfactants
AUTHOR(S): Seeger, W.; Guenther, A.; Thede, C.
CORPORATE SOURCE: Dep. Intern. Med., Justus-Liebig-Univ. Giessen, Giessen, W-6300, Germany
SOURCE: American Journal of Physiology (1992), 262(3, Pt. 1), L286-L291
CODEN: AJPHAP; ISSN: 0002-9513
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Inhibition of surfactant function by plasma-derived proteins is assumed to occur under conditions of alveolar protein leakage. The authors investigated surface properties and sensitivity to the inhibitory capacity

of fibrinogen (Fbg) of artificial surfactants in a pulsating-bubble surfactometer. Phospholipid-fatty acid mixts. (PLM) with or without hydrophobic apoproteins [natural bovine surfactant proteins (SP) B and C, recombinant human SP-C] were used. Without Fbg, all apoprotein-based surfactants exhibited rapid absorption facilities and reduced surface tension to near zero values under dynamic compression. Fbg caused a dose-dependent redn. of adsorption kinetics and dynamic surface tension-lowering properties of all surfactant prepns., but there was a marked rank order of "Fbg sensitivity": PLM without apoprotein being the most sensitive and SP-B-based PLM the least. Fbg sensitivity of recombinant SP-C-based PLM could be lowered dose dependently by adding small amts. of SP-B. For further support of a putative role of SP-B in resistance to Fbg inhibition, calf lung surfactant ext. was incubated with monoclonal antibody against SP-B. Without Fbg, anti-SP-B had little influence. However, sensitivity to the inhibitory effect of Fbg was markedly and dose dependently increased by anti-SP-B but not by control Ig. Apparently, SP-B-based surfactant prepns. display markedly lower susceptibility to Fbg inhibition than SP-C combinants.

CC 1-9 (Pharmacology)

ST surfactant protein **phospholipid** mixt fibrinogen; respiratory distress syndrome surfactant protein **phospholipid**

IT Phosphatidylglycerols
Phospholipids, biological studies
RL: BIOL (Biological study)
(surface properties of mixts. of fatty acids and surfactant proteins and, fibrinogens interaction with)

IT Fatty acids, biological studies
RL: BIOL (Biological study)
(surface properties of mixts. of **phospholipids** and surfactant proteins and, fibrinogens interaction with)

IT Fibrinogens
RL: BIOL (Biological study)
(surfactant activity of proteins B and C mixts. with fatty acids and **phospholipids** response to)

IT Surfactants
(surfactant proteins B and C mixts. with fatty acids and **phospholipids** as, fibrinogens interaction with)

IT Respiratory distress syndrome
(treatment of, with surfactant proteins B and C mixts. with fatty acids and **phospholipids**)

IT Newborn
(disorder, respiratory distress syndrome, treatment of, with surfactant proteins B and C mixts. with fatty acids and **phospholipids**)

IT Proteins, specific or class
RL: BIOL (Biological study)
(pulmonary surfactant-assocd., SP-B (surfactant protein B), surface properties of mixts. of fatty acids and **phospholipids** and, fibrinogens interaction with)

IT Proteins, specific or class
RL: BIOL (Biological study)
(pulmonary surfactant-assocd., SP-C (surfactant protein C), surface properties of mixts. of fatty acids and **phospholipids** and, fibrinogens interaction with)

IT **136955-87-8**, Lipoprotein SP-C (human pulmonary surfactant-associated reduced)
RL: BIOL (Biological study)
(surface properties of mixts. of fatty acids and **phospholipids** and, fibrinogens interaction with)

IT 2644-64-6, **Dipalmitoylphosphatidylcholine**
RL: BIOL (Biological study)

(surface properties of mixts. of fatty acids and surfactant proteins and, fibrinogens interaction with)
IT 57-10-3, Palmitic acid, biological studies
RL: BIOL (Biological study)
(surface properties of mixts. of **phospholipids** and surfactant proteins and, fibrinogens interaction with)
IT **136955-87-8**, Lipoprotein SP-C (human pulmonary surfactant-associated reduced)
RL: BIOL (Biological study)
(surface properties of mixts. of fatty acids and **phospholipids** and, fibrinogens interaction with)
RN 136955-87-8 CAPLUS
CN Lipoprotein SP-C (human pulmonary surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:115092 CAPLUS
DOCUMENT NUMBER: 114:115092
TITLE: Lipoprotein pulmonary surfactant preparation and use
INVENTOR(S): Curstedt, Tore; Lowenadler, Bjorn; Jornvall, Hans; Robertsson, Bengt
PATENT ASSIGNEE(S): KabiGen AB, Swed.
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 368823	A2	19900516	EP 1989-850346	19891011
EP 368823	A3	19900523		
EP 368823	B1	19930120		
EP 368823	B2	19981223		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
AT 84799	E	19930215	AT 1989-850346	19891011
JP 02145599	A2	19900605	JP 1989-268838	19891016
JP 2963923	B2	19991018		
CA 2000893	AA	19900418	CA 1989-2000893	19891017
CA 2000893	C	20000808		
AU 8942996	A1	19900426	AU 1989-42996	19891017
AU 623180	B2	19920507		
US 5223481	A	19930629	US 1989-423346	19891018
US 5455227	A	19951003	US 1993-64382	19930521

PRIORITY APPLN. INFO.: SE 1988-3713 A 19881018
EP 1989-850346 A 19891011
US 1989-423346 A3 19891018

OTHER SOURCE(S): MARPAT 114:115092
AB A pulmonary surfactant comprises an alveolar polypeptide covalently bound to 1 or 2 fatty acids, preferably palmitic, stearic, oleic, linoleic, or linolenic acid. The peptide portion comprises at least the peptide sequence Ile-Pro-Cys-Cys-Pro-Val. A 35 amino acid peptide with 2 palmitate residues at Cys 5 and Cys 6 was isolated by reversed-phase HPLC of alveolar lavage on Lipidex-5000 in ethylene Cl:MeOH 1:4. This proteolipid surfactant was mixed with protein-free phospholipids in a pulsating bubble instrument. The native proteolipid had rapid adsorption (<2 s) and min. surface tension .apprx.0 mN/m. The peptide with lipid

removed had slow adsorption (>120 s) and min. surface tension .apprx.20 mN/m. The pulmonary surfactant(s) can be administered to facilitate respiration in mammals. Synthetic peptides were also prepd.

IC ICM C07K007-00
ICS A61K037-00

CC 1-9 (Pharmacology)
Section cross-reference(s): 34

IT **Phospholipids**, compounds
RL: BIOL (Biological study)
(mixts., with alveolar surfactant lipoprotein, as pulmonary surfactants)

IT **117501-35-6 117501-36-7 132506-38-8**
RL: BIOL (Biological study)
(lipoprotein contg. amino acid sequence, as pulmonary surfactant)

IT 132506-37-7P **132506-39-9P 132506-40-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in proteolipid pulmonary surfactant prepn.)

IT **117501-35-6 117501-36-7 132506-38-8**
RL: BIOL (Biological study)
(lipoprotein contg. amino acid sequence, as pulmonary surfactant)

RN 117501-35-6 CAPLUS
CN Pulmonary surfactant-associated peptide (human 3.7-kilodalton reduced), 2-glycine- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

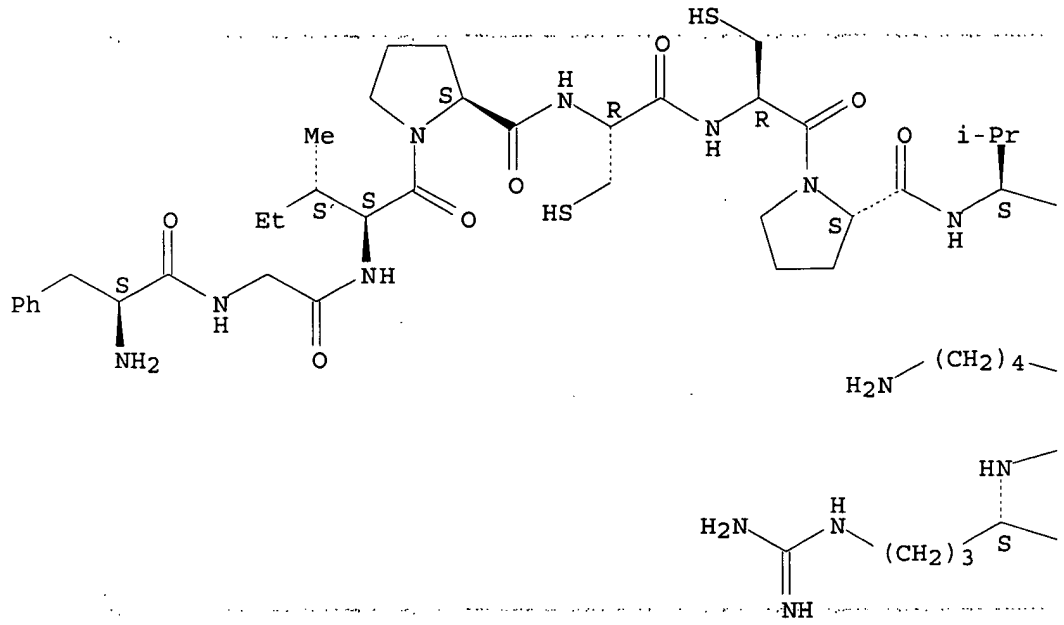
RN 117501-36-7 CAPLUS
CN Pulmonary surfactant-associated peptide (human 3.7-kilodalton reduced), 2-L-arginine- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

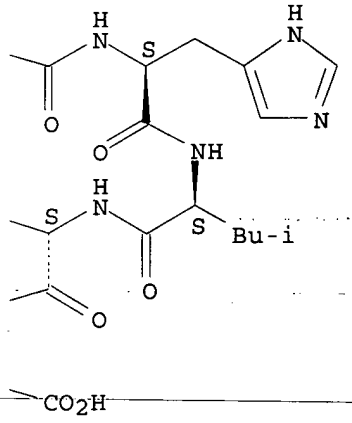
RN 132506-38-8 CAPLUS
CN L-Arginine, N2-[N2-[N-[N-[N-[1-[N-[N-[1-[N-(N-L-phenylalanylglycyl)-L-isoleucyl]-L-prolyl]-L-cysteinyl]-L-cysteinyl]-L-prolyl]-L-valyl]-L-histidyl]-L-leucyl]-L-lysyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

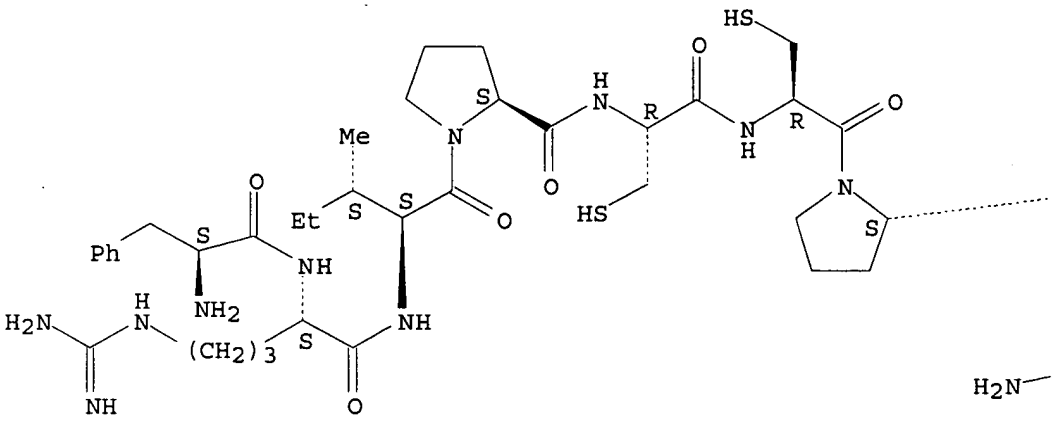


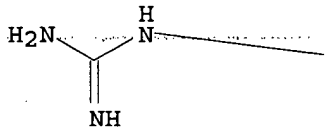
IT **132506-39-9P 132506-40-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, in proteolipid pulmonary surfactant prepn.)
RN 132506-39-9 CAPLUS
CN L-Arginine, N2-[N2-[N-[N-[N-[1-[N-[N-[1-[N-(N2-L-phenylalanyl-L-arginyl)-L-isoleucyl]-L-prolyl]-L-cysteinyl]-L-cysteinyl]-L-prolyl]-L-valyl]-L-

histidyl]-L-leucyl]-L-lysyl]- (9CI) (CA INDEX NAME)

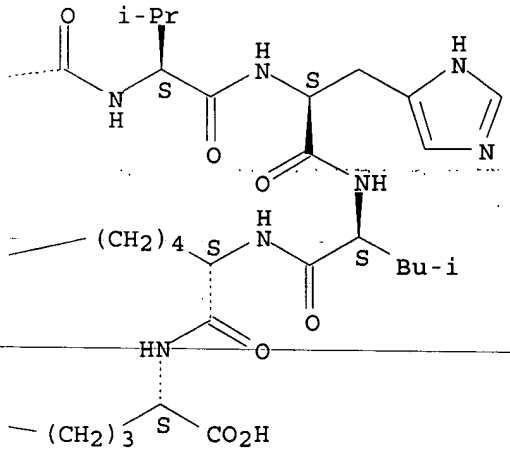
Absolute stereochemistry.

PAGE 1-A





PAGE 1-B

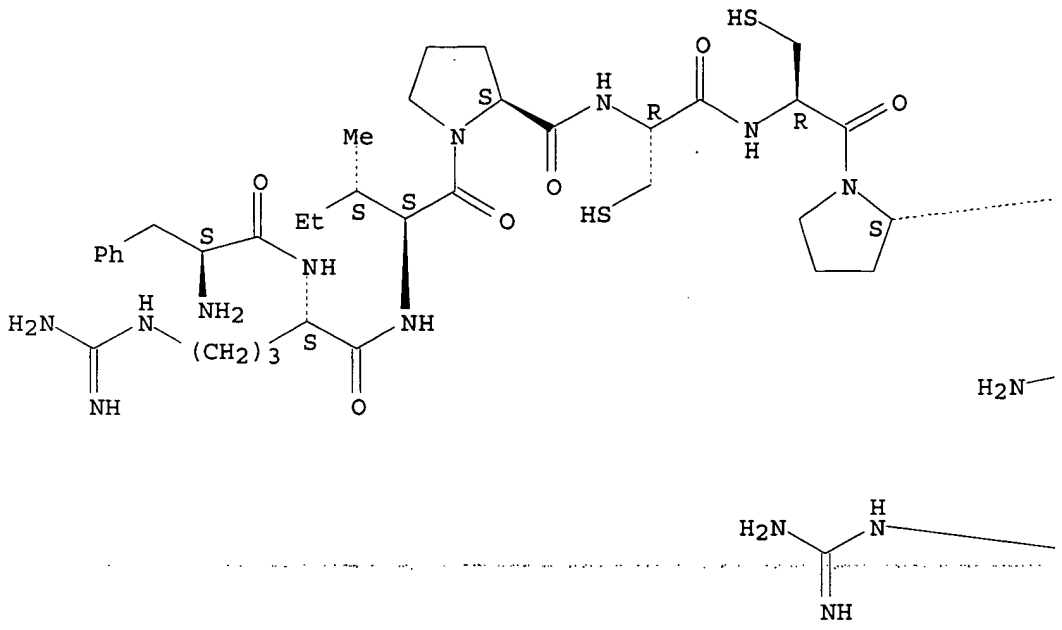


RN 132506-40-2 CAPLUS
CN L-Valine, L-phenylalanyl-L-arginyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-

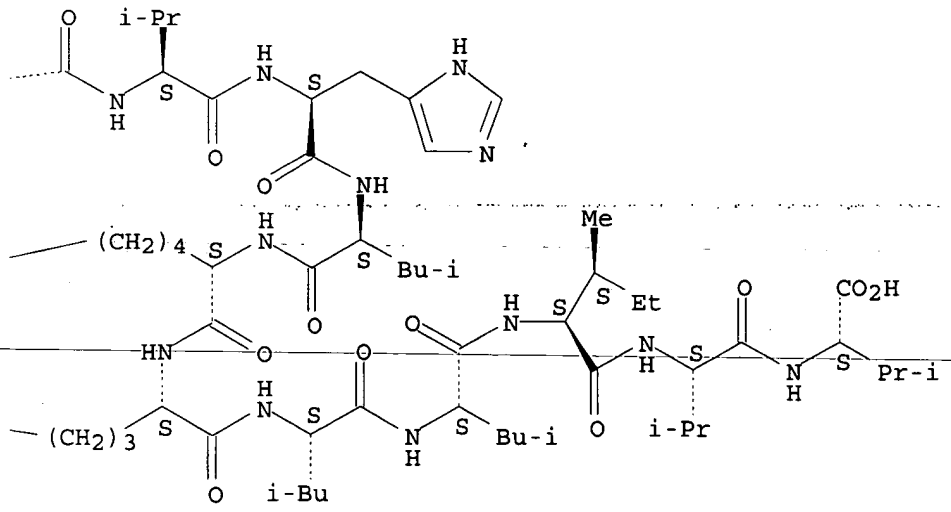
L-leucyl-L-isoleucyl-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



L26 ANSWER 20 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:429270 CAPLUS
DOCUMENT NUMBER: 113:29270
TITLE: Drug delivery using pulmonary surfactant to facilitate absorption
INVENTOR(S): Weber, Allan E.
PATENT ASSIGNEE(S): Abbott Laboratories, USA
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 335133	A2	19891004	EP 1989-103858	19890306
EP 335133	A3	19900516		
R: BE, DE, FR, GB, IT				
AU 8930737	A1	19891005	AU 1989-30737	19890224
JP 02006405	A2	19900110	JP 1989-80213	19890330

PRIORITY APPLN. INFO.: US 1988-175741 19880331

AB Pulmonary drug delivery systems include a drug admixed or covalently bonded to a component of a surfactant protein and phospholipid mixt. A compn. contained leuprolide acetate, dipalmitoylphosphatidylcholine, palmitic acid, tripalmitin, and a soln. of bovine lung lipids.

IC ICM A61K047-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 2
IT **Phospholipids**, biological studies
RL: BIOL (Biological study)
(drugs delivery to lung in protein surfactant soln. contg.)
IT 113-79-1 53714-56-0, Leuprolide 74381-53-6, Leuprolide acetate
RL: BIOL (Biological study)
(delivery system for, to lung, **phospholipids** and lung surfactants in)
IT **117149-08-3** 117149-09-4 **117149-10-7** 117149-11-8
117149-12-9 117259-36-6 **117259-37-7** 117259-42-4
117259-43-5 117259-44-6 117259-51-5 117259-53-7 117259-54-8
117259-55-9 117278-76-9
RL: BIOL (Biological study)
(pulmonary surfactant component, for drug delivery to lung)
IT **117149-08-3 117149-10-7 117259-37-7**
RL: BIOL (Biological study)
(pulmonary surfactant component, for drug delivery to lung)
RN 117149-08-3 CAPLUS
CN L-Threonine, glycyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valylglycyl-L-alanyl-L-leucyl-L-leucyl-L-methionylglycyl-L-leucyl-L-histidyl-L-methionyl-L-seryl-L-glutaminyl-L-lysyl-L-histidyl- (9CI) (CA INDEX NAME)

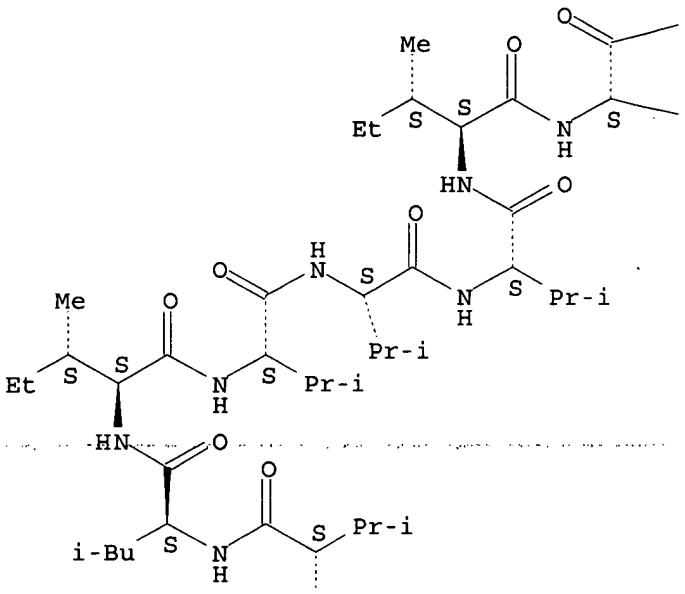
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 117149-10-7 CAPLUS
CN 28-84-Protein SP 5, prepro- (human lung clone h5k-18 surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 117259-37-7 CAPLUS

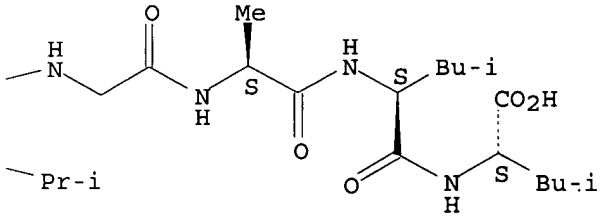
CN L-Leucine, L-leucyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valylglycyl-L-alanyl-L-leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

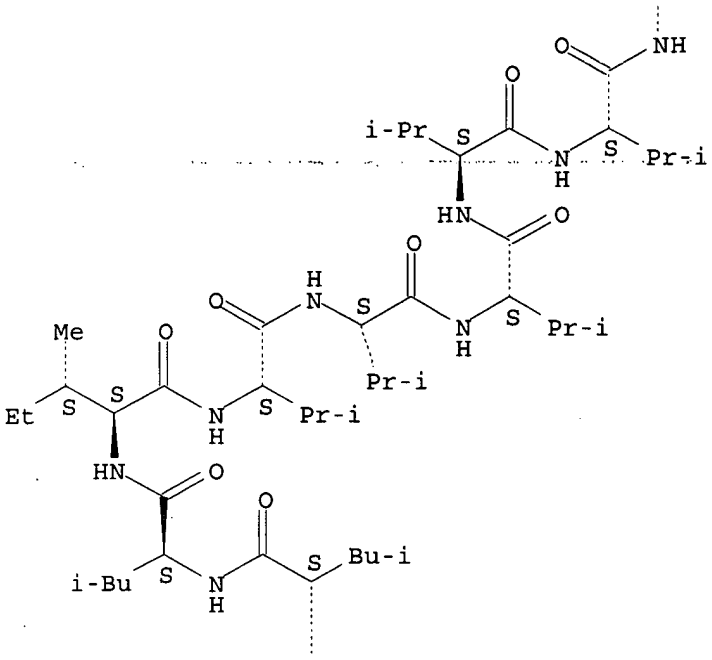
PAGE 1-B



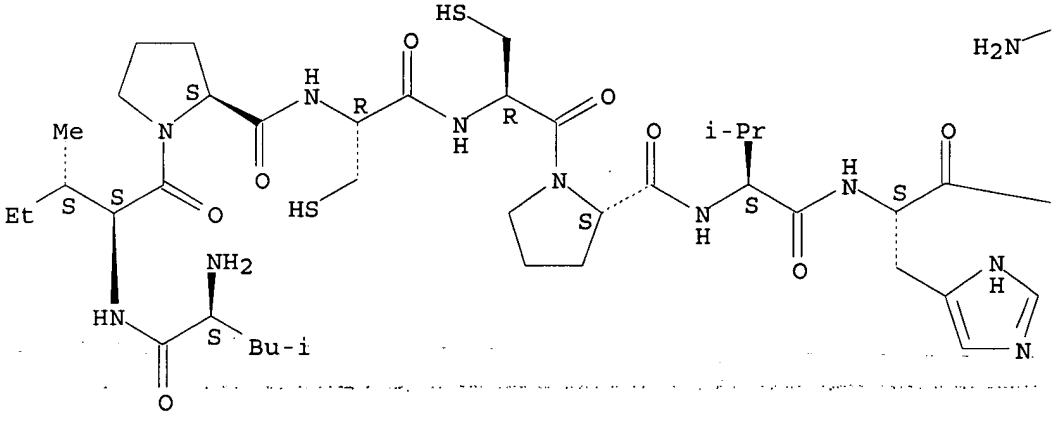
PAGE 1-C



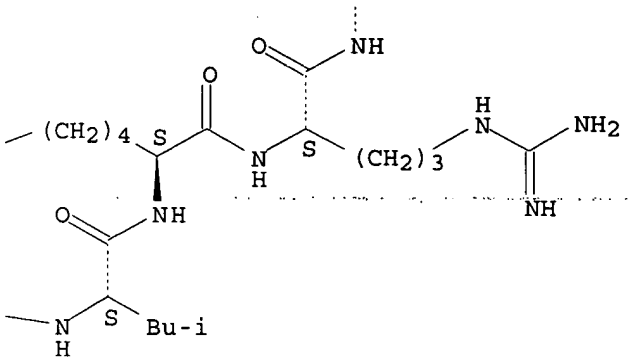
PAGE 2-B



PAGE 3-A



PAGE 3-B



L26 ANSWER 21 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:16277 CAPLUS
DOCUMENT NUMBER: 112:16277
TITLE: Proteins and protein compositions and their use as pulmonary surfactants
INVENTOR(S): Curstedt, Tore; Robertsson, Bengt; Joernvall, Hans
PATENT ASSIGNEE(S): KabiGen AB, Swed.
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8900167	A1	19890112	WO 1988-SE361	19880629
W: AU, JP, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8819963	A1	19890130	AU 1988-19963	19880629
PRIORITY APPLN. INFO.:			SE 1987-2724	19870701
			SE 1987-3661	19870922
			WO 1988-SE361	19880629

OTHER SOURCE(S): MARPAT 112:16277

AB Proteins Leu-Leu-Val-Val-Val-Val-Val-Val-Leu-Leu-Val-Val-Val-K-Ile-L-Gly-Ala-Leu-Leu-Met-Gly-Leu (I; K, L = Ile, Gly, Val; preferably K = Ile, L = Gly, or K = L = Val), M-Arg-Ile-Pro-Cys-Cys-Pro-Val-N-Leu-Lys-Arg-Leu-Leu-Val-Val-Val-Val-Val-Val-Leu-Leu-Val-Val-Val-K-Ile-L-Gly-Ala-Leu-Leu-Met-Gly-Leu (II; K, L as above; M = Leu, Phe; N = Asn, His), and Phe-Pro-Ile-Pro-Leu-Pro-Phe-Cys-Trp-Leu-Cys-Arg-Thr-Leu-Ile-Lys-Arg-Ile-Gln-Ala-Val-Val-Pro-Lys-Gly-Val-Leu-Leu-Lys-Ala-Val-Ala-Gln-Val-Cys-Ser-Val-Ser-Pro-Leu-Val-Val-Gly-Gly-Ile-Cys-Gln-Cys-Leu-Ala-Glu-Arg-Tyr-Ile-Val-Ile-Cys-Leu-Asn-Met-Leu-Leu-Asp-Arg-Thr-Leu-Pro-Gln-Leu-Val-Cys-Gly-Leu-Val-Leu-Arg-Cys-Ser-Ser (III) are effective as pulmonary surfactant components. Pharmaceutical compns. contg. a phospholipid-like material and the proteins or combinations of I and III or II and III are described which can facilitate respiration in mammals, including humans. Pig lung was extd. with CCl3/MeOH (2:1), and the ext. was subjected to reversed-phase chromatog. on Lipidex-5000 with C2H4Cl2/MeOH (1:4). The phospholipid fraction was dissolved in CCl3/MeOH (1:1) and applied to a column of Sephadex LH-60 using the same solvent. The 1st 470 mL was collected, dried, and rechromatographed on the same system. Protein

fractions 1 and 2 (5 mL each, 1st 2 peaks) were collected and combined with phospholipids (phospholipids + 1, phospholipids + 2) 1,2-dipalmitoyl-sn-glycero-3-phosphocholine, 1-palmitoyl-2-oleoyl-sn-glycero-3-phosphocholine, and 1,2-dipalmitoyl-sn-glycero-3-phosphoglycerol (55:35:10, wt./wt./wt.) at a ratio of 1:50, resp. In treatment of artificially ventilated, anesthetized, paralyzed rabbit fetuses, tidal vols. were greater in fetuses treated with protein + phospholipids than in untreated controls or those treated with phospholipids only.

IC ICM C07K007-10
ICS A61K037-02; A61K037-22

CC 1-9 (Pharmacology)
Section cross-reference(s): 63

ST protein **phospholipid** lung surfactant

IT Respiratory tract
(disease, treatment of, surfactant for, proteins or **phospholipid**/protein mixts. as)

IT 114470-61-0, Protein SP 8 (pig lung surfactant-associated reduced)
124301-31-1 **124301-32-2**
RL: BIOL (Biological study)
(pulmonary surfactant contg.)

IT **124301-32-2**
RL: BIOL (Biological study)
(pulmonary surfactant contg.)

RN 124301-32-2 CAPLUS

CN L-Leucine, L-phenylalanyl-L-arginyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-valyl-L-leucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valylglycyl-L-alanyl-L-leucyl-L-leucyl-L-methionylglycyl- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 22 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:149176 CAPLUS
DOCUMENT NUMBER: 110:149176
TITLE: Recombinant alveolar surfactant protein
INVENTOR(S): Schilling, James W., Jr.; White, Robert T.; Cordell, Barbara; Benson, Bradley J.
PATENT ASSIGNEE(S): California Biotechnology, Inc., USA
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8805820	A1	19880811	WO 1988-US92	19880115
W: AU, DK, JP, KR, NO				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8812948	A1	19880824	AU 1988-12948	19880115
US 5169761	A	19921208	US 1991-699960	19910514
US 5385840	A	19950131	US 1992-965745	19921023
US 5430020	A	19950704	US 1993-74290	19930609
US 5840527	A	19981124	US 1995-483939	19950607

PRIORITY APPLN. INFO.: US 1987-8453 A 19870129
US 1984-680358 A2 19841211
US 1985-808843 A2 19851213
US 1986-857715 A2 19860430

US 1987-117099	B2	19871104
WO 1988-US92	A	19880115
US 1988-266443	B2	19881101
US 1989-310035	B3	19890210
US 1989-430497	B1	19891101
US 1990-524360	A3	19900517
US 1991-639250	B1	19910107
US 1991-699960	A3	19910514
US 1993-116225	B1	19930902
US 1995-384609	B1	19950203

AB The cDNAs for human and dog 5 and 18 kilodalton (5K and 18K) alveolar surfactant proteins (ASPs) are cloned and sequenced. The human 5 and 18K cDNAs are expressed in CHO cells, and a fragment of the 18K protein is produced in Escherichia coli. The cDNAs encoding human ASPs with mol. wts. 18 and 5 kilodaltons (kDa) were cloned and expressed in CHO-K1 cells. ASP 32 kDa protein (recombinant or purified from tissue) was purified using a mannose-contg. affinity column. In vivo tests with rabbit fetuses indicated that a mixt. of phospholipids and human "10K" proteins (a mixt. of 5 and 18 kilodalton and related proteins) is as effective as control surface active material prepd. from rabbit lungs (Pins, compliance, and vol. at specific pressures were detd.).

IC C12N021-00; C12P019-34; C12R011-9; C07K013-00
ICM C12N015-00
ICS C12N001-06; C12P019-34

CC 3-4 (Biochemical Genetics)

IT **Phospholipids**, biological studies
RL: BIOL (Biological study)
(mixts. of recombinant alveolar surfactant proteins and, for treatment of respiratory distress syndrome)

IT **113041-66-0**, Lipoprotein SPL(pVal) (human clone RJ-21/TP9-1 precursor protein moiety reduced) **115427-08-2** 115427-09-3, Protein SP 18 (human lung clone ph18K-3 surfactant-associated precursor reduced) 119332-55-7, Protein SP-B (Canis familiaris lung clone pD10k-4/pD10k-1 surfactant-associated precursor fragment reduced)
RL: PRP (Properties)
(amino acid sequence of and expression in CHO cells and Escherichia coli of cDNA for)

IT **113041-66-0**, Lipoprotein SPL(pVal) (human clone RJ-21/TP9-1 precursor protein moiety reduced) **115427-08-2**
RL: PRP (Properties)
(amino acid sequence of and expression in CHO cells and Escherichia coli of cDNA for)

RN 113041-66-0 CAPLUS
CN Protein SP 5, prepro- (human lung clone h5k-18 surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 115427-08-2 CAPLUS
CN Protein SP 5, prepro- (human lung clone 19 surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L26 ANSWER 23 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1989:89914 CAPLUS
DOCUMENT NUMBER: 110:89914
TITLE: Recombinant pulmonary hydrophobic surfactant-associated proteins and their use in diagnosis and treatment of pulmonary diseases
INVENTOR(S): Whitsett, Jeffrey A.; Fox, J. Lawrence; Pilot-Matias,

Tami J.; Meuth, Joseph L.; Sarin, Virender K.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 139 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8803170	A1	19880505	WO 1987-US2536	19871002
W: JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
WO 8706943	A1	19871119	WO 1986-US2258	19861024
W: JP				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
JP 01501282	T2	19890511	JP 1987-506865	19871002
WO 8804324	A1	19880616	WO 1987-US3180	19871203
W: AU, DK, KR, NO				
RW: BJ, CF, CG, CM, GA, ML, MR, SN, TD, TG				
AU 8810523	A1	19880630	AU 1988-10523	19871203
AU 616164	B2	19911024		
EP 307513	A2	19890322	EP 1987-117967	19871204
EP 307513	A3	19900110		
R: ES, GR				
ZA 8709208	A	19880831	ZA 1987-9208	19871208
DK 8804415	A	19880805	DK 1988-4415	19880805
NO 8803484	A	19881007	NO 1988-3484	19880805

PRIORITY APPLN. INFO.:
WO 1986-US2258 19861024
US 1986-939206 19861208
US 1987-60719 19870610
US 1987-101680 19871001
US 1986-860239 19860506
WO 1987-US2536 19871002
WO 1987-US3180 19871203

AB The genes and cDNAs encoding human hydrophobic surfactant-assocd. proteins (SAPs) SAP(Val) and SAP(Phe) are cloned, sequenced, and expressed in Escherichia coli and mammalian cells. SAP peptides are synthesized and antibodies against these peptides are prepd. The antibodies may be used to diagnose diseases characterized by insufficient pulmonary surfactant material (e.g. hyaline membrane disease), and the SAPs may be used to treat such diseases. Human cDNA for SAP(Val) proprotein was fused with the gene for E. coli CMP-KDO synthetase and the resulting chimeric gene was expressed in E. coli. SAP(Val) or SAP(Phe) were mixed with lipids (e.g. dipalmitoylphosphatidylcholine and phosphatidylglycerol) and tested with a modified Wilhelmy Surface Balance: the proteins substantially decreased the surface tension and increased adsorption. SAP peptides were also found to increase the lipid uptake of 3T3 and type II cells in culture by 7 to 70-fold.

IC ICM C12P021-00
ICS C12P021-02; C12N005-00; C07K007-10; C07H015-12

CC 3-4 (Biochemical Genetics)
Section cross-reference(s): 63

IT Lipids, biological studies
Phosphatidylcholines, biological studies
Phosphatidylglycerols
Phosphatidylinositols
Phospholipids, biological studies
RL: BIOL (Biological study)

(pharmaceutical contg. surfactant-assocd. protein and, for maintaining surface tension of lung alveoli)

IT Respiratory tract
(epithelium, biol. active substance delivery to, recombinant surfactant-assocd. protein-**phospholipid** mixt. for)

IT **115427-08-2** 119214-20-9, Protein SP-B (human lung surfactant-associated precursor reduced)
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of and expression in Escherichia coli of cDNA for)

IT 57-88-5, Cholesterol, biological studies 57-88-5D, Cholesterol, esters 2644-64-6, **Dipalmitoylphosphatidylcholine**
RL: BIOL (Biological study)
(pharmaceutical contg. surfactant-assocd. protein and, for maintaining surface tension of lung alveoli of animals)

IT 117149-07-2 **117149-08-3** 117149-09-4 **117149-10-7**
117149-11-8 117149-12-9 117259-36-6 **117259-37-7**
117259-38-8 117259-39-9 117259-40-2 **117259-41-3**
117259-42-4 117259-43-5 117259-44-6 117259-45-7 117259-46-8
117259-47-9 117259-48-0 117259-49-1 117259-50-4 117259-51-5
117259-52-6 117278-76-9 117278-77-0
RL: PRP (Properties)
(surfactant-assocd. protein, synthetic)

IT **115427-08-2**
RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of and expression in Escherichia coli of cDNA for)

RN 115427-08-2 CAPLUS
CN Protein SP 5, prepro- (human lung clone 19 surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **117149-08-3 117149-10-7 117259-37-7**
117259-41-3
RL: PRP (Properties)
(surfactant-assocd. protein, synthetic)

RN 117149-08-3 CAPLUS
CN L-Threonine, glycyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valylglycyl-L-alanyl-L-leucyl-L-leucyl-L-methionylglycyl-L-leucyl-L-histidyl-L-methionyl-L-seryl-L-glutaminyl-L-lysyl-L-histidyl- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

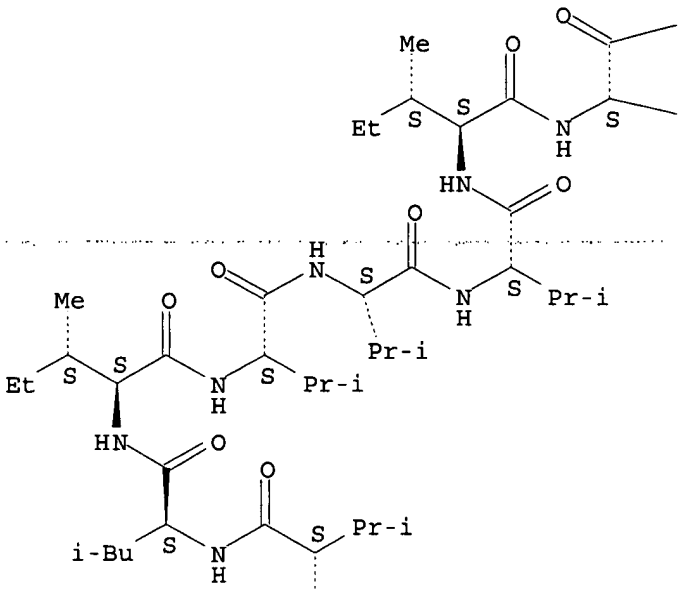
RN 117149-10-7 CAPLUS
CN 28-84-Protein SP 5, prepro- (human lung clone h5k-18 surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 117259-37-7 CAPLUS
CN L-Leucine, L-leucyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valylglycyl-L-alanyl-L-leucyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-B



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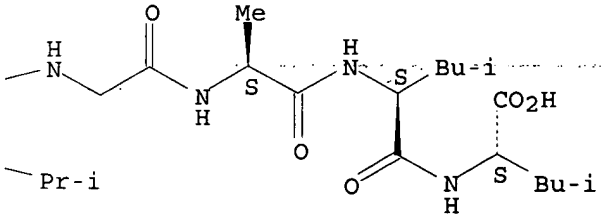

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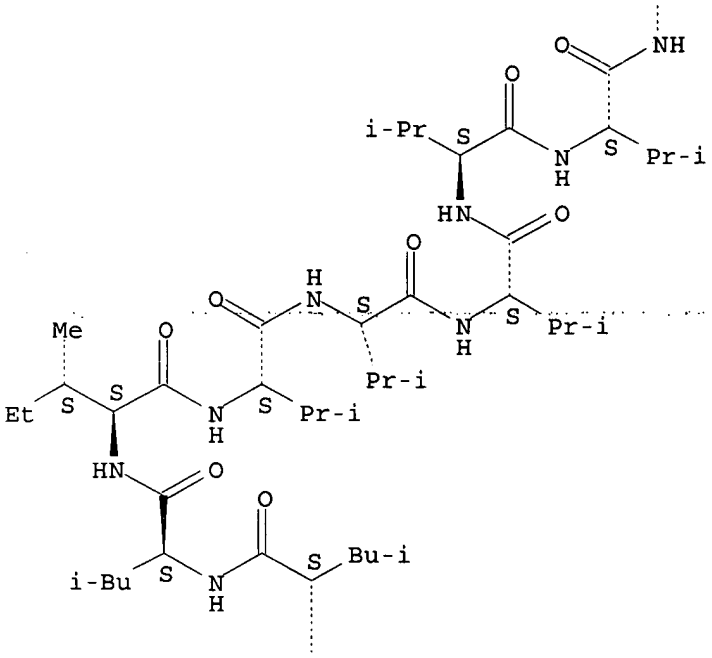
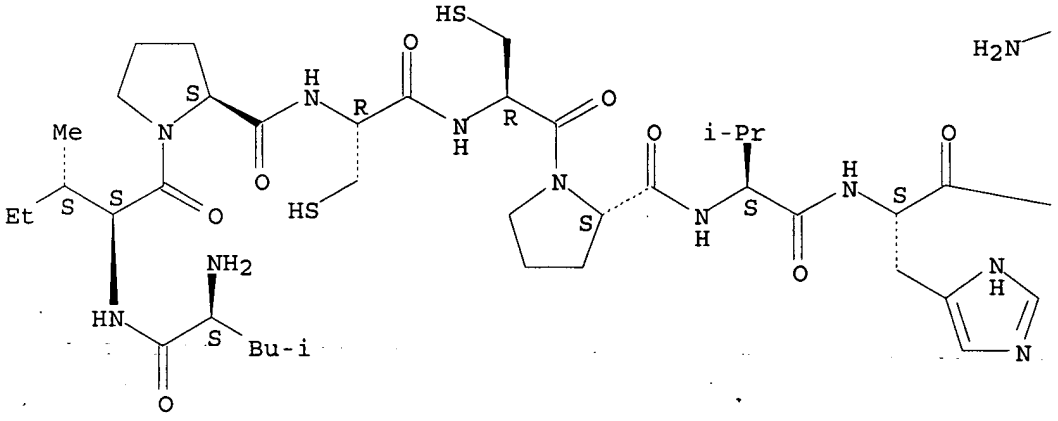
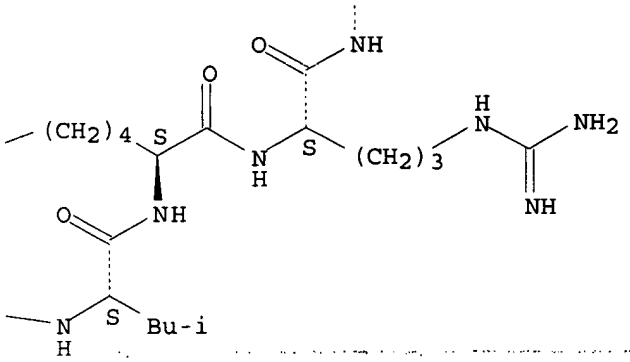


PAGE 3-A



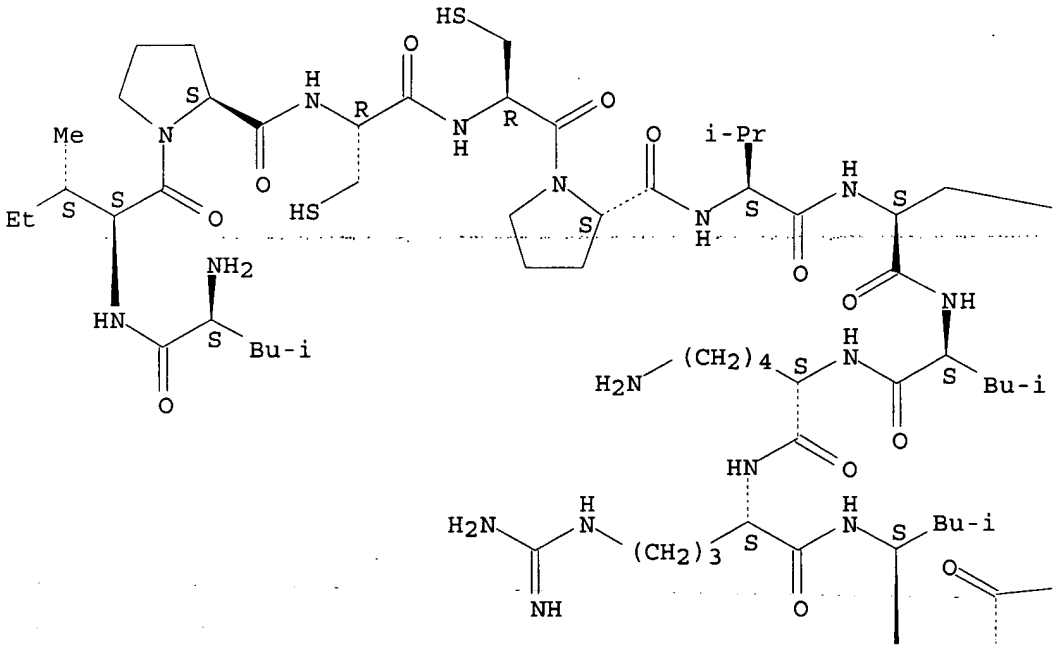
PAGE 3-B



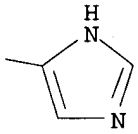
RN 117259-41-3 CAPLUS
CN Glycine, L-leucyl-L-isoleucyl-L-prolyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-valyl-L-histidyl-L-leucyl-L-lysyl-L-arginyl-L-leucyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-valyl-L-leucyl-L-isoleucyl-L-valyl-L-valyl-L-valyl-L-isoleucyl-L-valyl- (9CI) (CA INDEX NAME)

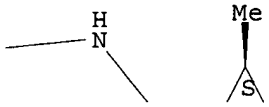
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





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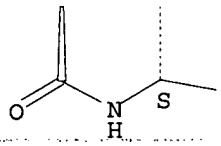

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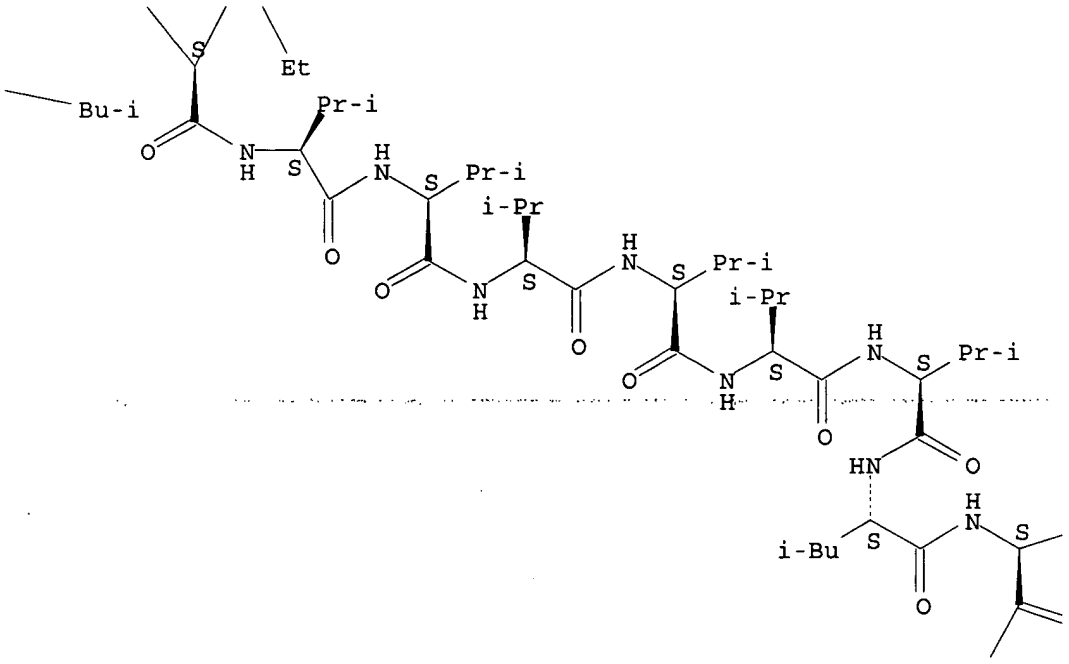

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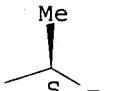

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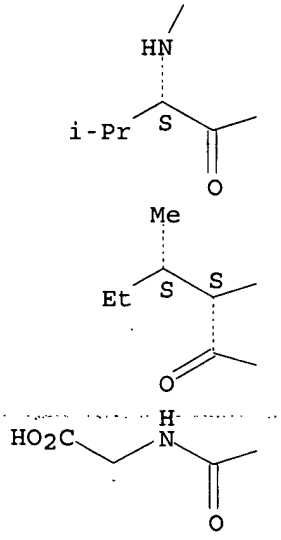

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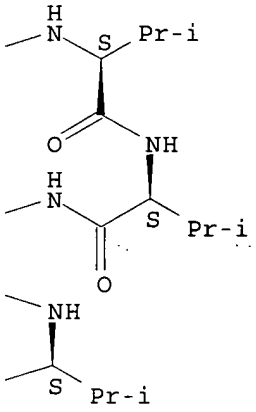


L26 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1988:402600 CAPLUS

DOCUMENT NUMBER: 109:2600

TITLE: Low molecular weight human pulmonary surfactant protein (SP5): isolation, characterization, and cDNA and amino acid sequences

AUTHOR(S): Warr, Rhonda G.; Hawgood, Samuel; Buckley, Douglas I.; Crisp, Tracey M.; Schilling, James; Benson, Bradley J.; Ballard, Philip L.; Clements, John A.; White, R. Tyler

CORPORATE SOURCE: California Biotechnol., Mountain View, CA, 94043, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1987), 84(22), 7915-19
CODEN: PNASA6; ISSN: 0027-8424

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pulmonary surfactant is a lipid-protein complex that promotes alveolar stability by lowering the surface tension at the air-fluid interface in the peripheral air spaces. A group of hydrophobic surfactant-assocd. proteins has been shown to be essential for rapid surface film formation by surfactant phosphlipids. A hydrophobic surfactant protein of .apprx.5 kilodaltons (kDa), termed SP5, was purified from bronchopulmonary lavage fluid from a patient with alveolar proteinosis and shown to promote rapid surface film formation by simple mixts. of phospholipids. The full amino acid sequence of human SP5 was derived from the nucleotide sequence of cDNAs identified with oligonucleotide probes based on the N-terminal sequence of SP5. Protein SP5 isolated from surfactant was a fragment of a much larger precursor protein (21 kDa). The precursor contained an extremely hydrophobic region of 34 amino acids that comprised most of the mature SP5. This hydrophobicity explained the unusual soly. characteristics of SP5 and the fact that it is lipid-assocd. when isolated from lung.
CC 6-3 (General Biochemistry)
Section cross-reference(s): 3
IT **Phospholipids**, properties
RL: PRP (Properties)
(surface activity of, in protein SP5 of human lung surfactant)
IT **113041-66-0 114796-61-1**
RL: PRP (Properties)
(amino acid sequence of, gene-derived)
IT **113041-66-0 114796-61-1**
RL: PRP (Properties)
(amino acid sequence of, gene-derived)
RN 113041-66-0 CAPLUS
CN Protein SP 5, prepro- (human lung clone h5k-18 surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 114796-61-1 CAPLUS
CN Protein, pro- (human clone h5k-18 lung surfactant-associated reduced) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L21 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:271995 CAPLUS
DOCUMENT NUMBER: 138:307589
TITLE: Bath for substitution plating with bismuth comprising complexing agent composed of aminocarboxylic acid and thiourea
INVENTOR(S): Uchida, Mamoru; Tanaka, Kaoru
PATENT ASSIGNEE(S): Ishihara Yakuhin Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 2003105553 A2 20030409 JP 2001-295685 20010927
PRIORITY APPLN. INFO.: JP 2001-295685 20010927
AB A bath for substitution plating with Bi comprises: (1) a sol. Bi salt, (2) an org. or inorg. acid, and (3) a complexing agent composed of a mixt. of an aminocarboxylic acid and a thiourea. The aminocarboxylic acid is preferably diethylenetriamine pentacetic acid, triethylenetetraminepentacetic acid, or hydroethylethylenediamine triacetic acid. The bath demonstrates high long-term stability and is capable of producing high-quality films.
IC ICM C23C018-31
CC 56-6 (Nonferrous Metals and Alloys)
IT **Surfactants**
(anionic; bath for substitution plating with bismuth comprising complexing agent composed of aminocarboxylic acid and thiourea)
IT **Surfactants**
(cationic; bath for substitution plating with bismuth comprising complexing agent composed of aminocarboxylic acid and thiourea)
IT **Surfactants**
(nonionic; bath for substitution plating with bismuth comprising complexing agent composed of aminocarboxylic acid and thiourea)
IT 52-90-4, Cysteine, uses 56-86-0, Glutamic acid, uses 60-00-4, EDTA, uses 62-56-6, Thiourea, uses 67-43-6 70-26-8, Ornithine 96-45-7, Ethylenethiourea 109-57-9, Allylthiourea 139-13-9, Nitrilotriacetic acid 139-33-3, EDTA, disodium salt 142-73-4, Iminodiacetic acid 150-25-4, **N**,**N**-Bis(2-hydroxyethyl)**glycine** 482-54-2 505-47-5 515-94-6 534-13-4, 1,3-Dimethylthiourea 869-52-3, Triethylenetetramine hexaacetic acid 3020-07-3 13311-39-2, Ethylenediamine tetrapropionic acid 26914-14-7, Diethylthiourea
RL: NUU (Other use, unclassified); USES (Uses)
(complexing agent; bath for **substitution** plating with bismuth comprising complexing agent composed of aminocarboxylic acid and thiourea)

L21 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:978317 CAPLUS
DOCUMENT NUMBER: 138:44406
TITLE: Scale conditioning and removal agents for heat exchangers
INVENTOR(S): Rootham, Michael W.; Varrin, Robert D.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002196891	A1	20021226	US 2001-884439	20010620

PRIORITY APPLN. INFO.: US 2001-884439 20010620
AB A method of conditioning and removing scale and deposits, esp. magnetite rich deposits, within heat exchangers or steam generators includes exchanging the heat transfer liq. by an aq. cleaning soln. and circulating it throughout the heat exchange system at a treatment temp. < 60.degree.C, at a pH of 4.5-6, and agitating the cleaning soln. by flow induced mixing, inert gas sparging, or pressure pulsing. The aq. cleaning soln. contains a chelating agent, a reducing agent, a pH control agent, and a non-ionic surfactant. The chelating agent can be EDTA, HEDTA, lauryl substituted EDTA, and polyaspartic acid with iminodisuccinate. The reducing agent can

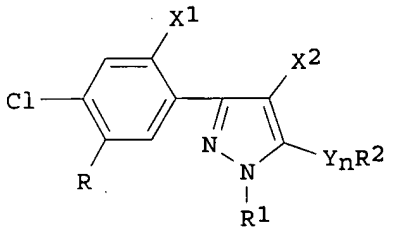
be ascorbic acid and its isomers, citric acid, hydrazine, catalyzed hydrazine, and carbohydrazide. The pH control agent is a nitrogen-contg. aliph. compd., such as triethanolamine, dimethylamine, ethylamine, 1,2-diaminoethane, diaminopropane, ethanolamine, diethanolamine, 2-methyl-2-amino-1-propanol, 5-aminopentanol, or methoxypropylamine. The non-ionic surfactant is Triton X-100. This treatment induces corrosion of < 0.001 in. per application in carbon and low alloy steels.

IC ICM G21C009-00
NCL 376305000
CC 61-8 (Water)
Section cross-reference(s): 46, 55
ST scale removal steam boiler heat exchanger chelating agent **surfactant**; steel corrosion prevention scale removal heat exchanger agitation
IT **Surfactants**
(nonionic; scale conditioning and removal agents for heat exchangers)
IT 60-00-4, Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, reactions
60-00-4D, **Glycine**, **N**,**N**'-1,2-ethanediylbis[**N**-(carboxymethyl)-, lauryl **substituted**, reactions
150-39-0, Glycine, N-[2-[bis(carboxymethyl)amino]ethyl]-N-(2-hydroxyethyl)-
7408-20-0, Iminodisuccinic acid 25608-40-6, Polyaspartic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(chelating agent; scale conditioning and removal agents for heat exchangers)
IT 9002-93-1, Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-
RL: NUU (Other use, unclassified); USES (Uses)
(**surfactant**; scale conditioning and removal agents for heat exchangers)

L21 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:986640 CAPLUS
DOCUMENT NUMBER: 124:79455
TITLE: Herbicide compositions containing 3-substituted phenylpyrazoles, organophosphorus compounds, and nonionic **surfactants**
INVENTOR(S): Yasueda, Masahiro; Higashimura, Minoru; Nakatani, Motokatsu; Mabuchi, Tsutomu; Shibayama, Shoichi
PATENT ASSIGNEE(S): Nihon Nohyaku Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07242510	A2	19950919	JP 1995-19653	19950112

PRIORITY APPLN. INFO.: JP 1994-14782 19940113
OTHER SOURCE(S): MARPAT 124:79455
GI



I

AB Herbicide compns. contain .gtoreq.1 of 3-substituted phenylpyrazoles I [R = Y1R3 [R3 = C1-6 (halo)alkyl, C2-6 alkenyl, C2-6 alkynyl; Y1 = O, S], Y2CHR4CO2R5 [R4 = H, C1-6 alkyl; R5 = H, C1-6 (halo)alkyl, C2-6 alkenyl, C2-6 alkynyl; Y2 = O, S, NH], CO2CHR4COY1R5 (R4, R5, Y1 = same as above), CO2R6 (R6 = C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl); R1 = C1-6 alkyl; R2 = H, C1-6 (halo)alkyl; X1, X2 = halo; Y = O, S, SO, SO2; n = 0, 1] and organophosphorus herbicides as active ingredients and .gtoreq.1 nonionic surfactants. The compns. are stable and show fast-acting and synergistic herbicidal effect. I (R = OCH2CO2Et, R1 = Me, R2 = CHF2, X1 = F, X2 = Cl, Yn = O) (II) 25.0, Neocol YSK (anionic surfactant) 1.0, SP-7290P (anionic surfactant) 2.0, aq. 3% xanthan gum soln. 15.0, propylene glycol 3.0, Silicone KM-73 0.5, and H2O to 100 wt. parts were mixed to give a suspension, 0.80 wt. parts of which was mixed with N-(phosphonomethyl)glycine trimethylsulfonium salt (III) 51.70, Neocol YSK 1.00, Dispersogen A-1494 2.00, Brian DL-400 (polyoxyethylene glycol dilaurate surfactant) (IV) 10.00, aq. 3% xanthan gum soln. 10.00, propylene glycol 5.00, benzisothiazole 0.05, and H2O to 100.00 wt. parts to give a suspension. Spray application of the suspension at 1 g/ha as II and 150 g/ha as III controlled Echinochloa crus-galli and Rumex japonicus by 60% and 50%, resp., in 3 days, vs. 30% each, for application of a control formulated without IV. The suspension was kept at 50.degree. for 4 wk to show 95.7% residual II and 99.7% residual III, vs. 27.6% and 93.0%, resp., for a control formulated without IV.

IC ICM A01N043-56
ICS A01N025-30

ICI A01N043-56, A01N057-18

CC 5-3 (Agrochemical Bioregulators)

ST phenylpyrazole organophosphorus herbicide nonionic **surfactant**; synergism phenylpyrazole organophosphorus herbicide suspension

IT Polyoxyalkylenes, biological studies
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(**surfactants**; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Amides, biological studies
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(N-(hydroxyethyl), ethoxylated, stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Glycosides
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(alkyl, **surfactants**; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Fatty acids, biological studies

RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(esters, **surfactants**; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Amines, biological studies
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(ethoxylated, stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Alcohols, biological studies
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(ethoxylated, **surfactants**; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT **Surfactants**
(nonionic, stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Alcohols, biological studies
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(polyhydric, **surfactants**; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Agrochemical formulations
(powders, wettable, stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Agrochemical formulations
(suspensions, stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT Herbicides
(synergistic, stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT 9005-02-1
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(Brian DL 400; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT 9016-45-9, Polyoxyethylene nonylphenol ether
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(Soprophor BS 10; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT 56-81-5, Glycerol, biological studies 12441-09-7, Sorbitan
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(fatty acid esters; stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT 1071-83-6D, **N**-(Phosphonomethyl)**glycine**, mixts. with phenylpyrazoles 35597-43-4D, mixts. with phenylpyrazoles 51276-47-2D, mixts. with phenylpyrazoles 171667-10-0

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(stable and fast-acting synergistic herbicides contg. **substituted** phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

IT 50-70-4D, Sorbitol, fatty acid esters 57-50-1D, Sucrose, fatty acid esters 1338-39-2, Span 20 9002-92-0, Noigen ET 143 9005-66-7, Tween 40 25618-55-7D, Polyglycerin, fatty acid esters 104552-09-2, Polyoxyethylene styrylphenyl ether 106392-12-5, HOE-S 3510 172344-91-1, HOE-S 2436
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(stable and fast-acting synergistic herbicides contg. substituted phenylpyrazoles, organophosphorus herbicides, and nonionic **surfactants**)

L21 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1990:11877 CAPLUS
DOCUMENT NUMBER: 112:11877
TITLE: Substitutes for N-phenylglycine in adhesive bonding to dentin
AUTHOR(S): Johnston, A. D.; Asmussen, E.; Bowen, R. L.
CORPORATE SOURCE: Paffenbarger Res. Cent., Am. Dent. Assoc. Health Found., Gaithersburg, MD, 20899, USA
SOURCE: Journal of Dental Research (1989), 68(9), 1337-44
CODEN: JDREAF; ISSN: 0022-0345
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Using bond strength measurements, a no. of related compds. were investigated in order to elucidate the role of the surface-active ingredient, N-phenylglycine (NPG), in exptl. 2- and 3-step bonding protocols resulting in adhesive bonding to dentin. All active compds. identified for 2- or 3-step protocol were N-aryl-.alpha.-amino acids, and the results delineate some of the key features of the NPG mol. for bonding. For the 3-step protocol, there was a requirement for a secondary or tertiary arom. amino group, a carboxylic acid group, and a single (secondary or tertiary) methylene unit between those two functional groups of the amino acid. For the 2-step protocol, addnl. substitutions at the para position of the Ph ring on the amine improved the bond strength. In both protocols, para-methyl- and para-chloro-substituted NPG analogs ranked higher than NPG. A "catalytic" effect of the arom. tertiary amino group on the polymn. of the adhering resin in both procedures could not be ruled out.

CC 63-7 (Pharmaceuticals)

IT **Surfactants**
(aryl amino acids as, adhesive bonding to dentin in relation to)

IT 56-40-6, Glycine, biological studies 107-97-1, N-Methylglycine 122-59-8, Phenoxyacetic acid 122-87-2, **N**-(4-Hydroxyphenyl) **glycine** 140-10-3, trans-Cinnamic acid, biological studies 141-82-2, Malonic acid, biological studies 150-25-4, **N**, **N**-Bis(2-hydroxyethyl)**glycine** 705-61-3 1477-50-5, Indole-2-carboxylic acid 2216-92-4, N-Phenylglycine ethyl ester 2521-89-3 2835-06-5, .alpha.-Phenylglycine 4896-81-5 5465-90-7, **N**-(4-Chlorophenyl)**glycine** 5652-38-0, N-Phenyl-.beta.-alanine 16955-08-1 21911-68-2 21911-69-3 21911-74-0 22094-69-5 40643-55-8, N-Methyl-N-phenylglycine 50845-77-7 54860-84-3 78348-24-0, Indoline-2-carboxylic acid 83418-59-1 83949-33-1 124192-91-2
RL: BIOL (Biological study)

(adhesive bonding to dentin in relation to, as phenylglycine **substitute**)

L21 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1975:17073 CAPLUS
DOCUMENT NUMBER: 82:17073
TITLE: Long chain carboxylic acids containing ether linkage. V. **N**-Methyl **substituted** **glycine**-type amphoterics containing alkoxy radical
AUTHOR(S): Abe, Yoshiro; Osanai, Shuichi; Matsushita, Takao
CORPORATE SOURCE: Dep. Appl. Chem., Keio Univ., Yokohama, Japan
SOURCE: Journal of the American Oil Chemists' Society (1974), 51(9), 385-8
CODEN: JAOCA7; ISSN: 0003-021X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Substituted glycine-type amphoteric surfactants I contg. long chain alkoxy and methylated amino groups, such as N-(2-alkoxyethyl)methylaminoacetic acids and N-(2-alkoxyethyl)-N-(carboxymethyl)-dimethylammonium chlorides, or N-[N-[2-alkoxyethyl]-2-aminoethyl]aminoacetic acids were prepd. and their growth inhibitory activities against g-pos., g-neg. bacilli, and some fungi were studied. Methyl substitution of the amino group of the long chain alkoxyaminoacetic acids increased the antimicrobial activities of I. The introduction of an aminoethyl radical between the alkoxyethyl and amino radicals of I also increased their antimicrobial activities. Dimethyl-substituted betaine-type amphoterics showed less antimicrobial activities than the corresponding I. Aq. solns. of I showed better surface activities at pH 4.0, 10.0 than at neutral pH.

CC 34-2 (Synthesis of Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 46, 1

ST amphoteric glycine **surfactant** microbicide; carboxylic amino **surfactant** microbicide; fungicide amphoteric glycine **surfactant**; bactericide amphoteric glycine **surfactant**

IT Bactericides, Disinfectants and Antiseptics
Fungicides and Fungistats
(glycine-type amphoteric **surfactants** as)

IT **Surfactants**
(glycine-type amphoteric, prepn. and microbicidal activity of)

IT 4536-30-5 38471-47-5 38471-49-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of glycine-type amphoteric **surfactants** from)

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=> fil wpids
FILE 'WPIDS' ENTERED AT 14:57:17 ON 10 NOV 2003
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FILE LAST UPDATED:          7 NOV 2003      <20031107/UP>
MOST RECENT DERWENT UPDATE:     200372        <200372/DW>
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                DEL HIS Y
L1             0 S  ?PVHLKR?

     FILE 'WPIDS' ENTERED AT 14:52:01 ON 10 NOV 2003
L2             2 S  ?PVHLKR?
L3             0 S NVANPMNLEUNLYS
L4             0 S NLEUNLYSNARG
L5             1 S ?NLEUNLYSNARG?
L6             2 S L2 OR L5
L7           765 S SURFACTANT (S) PROTEIN (S) (C OR B)
L8         21759 S N (S) SUBSTITU? (S) (GLY OR G OR GLYCINE)
L9            30 S L7 AND L8
L10          855 S N (3A) SUBSTITU? (3A) (GLY OR G OR GLYCINE)
L11            1 S L10 AND L7
L12         7686 S PHOSPHOLIPID? OR ?PHOSPHATIDYL?
L13           91 S L12 AND L7
L14         3436 S SPREAD? (S) AGENT#
L15            7 S L13 AND L14
L16            8 S L6 OR L11 OR L15
L17            2 S L10 AND L14

     FILE 'WPIDS' ENTERED AT 14:57:17 ON 10 NOV 2003

=> d .wp l16 1-8;d .wp l17 1-2
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L16  ANSWER 1 OF 8  WPIDS  COPYRIGHT 2003 THOMSON DERWENT on STN
AN   2003-605483 [57]   WPIDS
CR   2001-090142 [10]; 2002-518837 [55]; 2002-589751 [63]; 2002-626865 [67];
     2003-415715 [39]
DNN  N2003-482682       DNC C2003-164757
TI   Reducing resistance to air flow through mammalian upper respiratory system
     comprises administering a dose of a mixture of lipid crystal, as an
     aerosol through the external airway of the mammal..
```

DC B05 B07 P34
IN MAUTONE, A J
PA (SCRE-N) SCI DEV & RES INC
CYC 1
PI US 6572841 B1 20030603 (200357)* 13p
ADT US 6572841 B1 CIP of US 1999-450884 19991128, US 2000-639739 20000816
PRAI US 2000-639739 20000816; US 1999-450884 19991128
AB US 6572841 B UPAB: 20030906
NOVELTY - Resistance to air flow through mammalian upper respiratory system is reduced by administering dose of lipid crystal mixture, as aerosol through mammal's external airway. The mixture comprises (wt.%) lipid surfactant(s) (80-95), **spreading agent**(s) (0.5-20), and propellant(s). The lipids and **spreading agents** are insoluble in propellants.

DETAILED DESCRIPTION - Reducing resistance to air flow through mammalian upper respiratory system comprises administering a dose of a mixture of lipid crystal, as an aerosol through the external airway of the mammal. The mixture comprises (wt.%) lipid surfactant(s) (80-95), **spreading agent**(s) (0.5-20), and propellant(s). The lipid surfactant and **spreading agent** are cholesteryl esters, **phospholipids**, carbohydrates or proteins. The lipids and the **spreading agents** are insoluble in propellants.

ACTIVITY - Antiinflammatory; Antibacterial.

MECHANISM OF ACTION - Vaccine and Gene therapy.

USE - For decreasing the upper respiratory airway resistance.

ADVANTAGE - The invention effectively reduces surface tension of the epithelial lining, thus improves airflow through the upper respiratory system.

Dwg.0/0

TECH UPTX: 20030906
TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Components: The mixture is administered via nasal inhalation or oral inhalation utilizing a metered dose device.
The lipids are **phospholipids** and/or neutral lipids.
The **phospholipids** are a class known **phosphatidylcholines**.
The **phosphatidylcholines** is any saturated diacyl **phosphatidylcholine**, preferably **diacylphosphatidylglycerol**, **diacylphosphatidylserine**, **diacylphosphatidylinositol**, sphingomyelin, Cardiolipin, lysophospholipid, plasmalogen, diether phosphonolipid, or dialkylphosphonolipid.
The carbohydrates are glucose, fructose, galactose, or pneumogalactan or dextrose.
The **protein** is albumin, pulmonary **surfactant** specific **proteins** A, **B**, **C**, and/or D.
The cholesteryl ester is cholesteryl palmitate, cholesteryl oleate, or cholesteryl stearate.
The propellants are fluorocarbons, chlorofluorocarbons, hydrofluorocarbons, and/or carbon dioxide.
The therapeutically active agent is anti-inflammatory, de-congestive, antibiotic, anti-viral, anti-fungal, anti-parasitic and/or gene therapy agent.
The anti-inflammatory is a corticosteriod, preferably betamethasone dipropionate, and/or betamethasone valerate.
The de-congestive agent is phenylephrine hydrochloric acid, and/or phenylephrine bitartrate.
The antibiotic is erythromycin, amoxicillin, zythromax, and/or clavulanic acid.
The anti-viral is acyclovir.
The gene therapy is a nucleic acid.

95 % of the liquid crystals demonstrate a particle size of at most 4 microm in diameter.

L16 ANSWER 2 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-415715 [39] WPIDS
CR 2001-090142 [10]; 2002-518837 [55]; 2002-589751 [63]; 2002-626865 [67]; 2003-605483 [57]
DNN N2003-331227 DNC C2003-110096
TI Preventing occurrence of otitis externa in mammal, by administering dose mixture of lipid crystals containing lipid surfactant, **spreading agent** and propellant as aerosol through external auditory meatus.
DC B05 D22 P34
IN MAUTONE, A J
PA (SCRE-N) SCI DEV & RES INC
CYC 1
PI US 6521213 B1 20030218 (200339)* 13p
ADT US 6521213 B1 CIP of US 1999-450884 19991128, US 2000-639730 20000816
FDT US 6521213 B1 CIP of US 6156294
PRAI US 2000-639730 20000816; US 1999-450884 19991128
AB US 6521213 B UPAB: 20030906
NOVELTY - Preventing the occurrence of otitis externa, involves administering a mixture of lipid crystals as an aerosol through external auditory meatus of mammal. The mixture comprises (wt.%) lipid surfactant (80-99.5) and/or **spreading agent** (0.5-20) selected from cholesteryl esters, **phospholipids**, carbohydrates and proteins in powder form which are insoluble in propellants and propellant.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a process for preparing an otitis externa medicament which involves preparing mixture of lipid surfactant(s) and **spreading agent** and bottling the mixture in a container in which propellants are evaporated from a mixture and the aerosolized lipid crystals released for use as the medicament; and

(2) a method for increasing external auditory canal patency in mammals which involves administrating a mixture of lipid crystals as an aerosol through external auditory meatus of mammals.

ACTIVITY - Auditory; Antiinflammatory. No test details are given.

MECHANISM OF ACTION - None given.

USE - For treating and preventing the occurrence of otitis externa.

ADVANTAGE - The method forms a barrier upon the epithelial lining of the outer ear canal, thereby prevents the alkalization or the introduction of bacteria within the ear. The method uniformly and effectively delivers the active agents to the entire epithelial lining of the canal.

Dwg.0/0

TECH UPTX: 20030619

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The aerosolized mixture of lipid crystals comprises lipid surfactant, **spreading agent**, and therapeutic **agent** which are insoluble in propellant;

Preferred Drugs: The aerosolized mixture is administered using a metered dose device. The therapeutic **agents** are antiinflammatory **agent**, anti-bacterial **agent**, anti-mycotic **agent**, anti-viral **agent** such as acyclovir and/or gene therapy **agent** such as nucleic acid. The antiinflammatory **agent** is corticosteroid selected from hydrocortisone, hydrocortisone acetate, dexamethasone sodium phosphate, beta-methasone, beta-methasone diproprionate and/or beta-methasone valerate. The antibiotic **agent** is colistin sulfate, neomycin sulfate and/or polymyxin-b and the antimycoctic **agent** is nystatin and/or clotrimazole.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The lipids

are selected from **phospholipids** and/or neutral lipids. The **phospholipids** are **phosphatidylcholines** such as fully saturated diacyl **phosphatidylcholine**, **diacylphosphatidyl** ethanolamine, **diacylphosphatidyl** glycerol, **diacylphosphatidyl** serine, **diacylphosphatidyl** inositol, sphingomyelin, cardiolipin, lysophospholipid, plasmalogen, diether phosphonolipid and dialkylphospholipid. The carbohydrates are selected from glucose, fructose, galactose, pneumogalactan and dextrose. The **proteins** are selected from albumin and/or pulmonary **surfactant** specific **proteins** A,**B**,**C** ,D. The cholesteryl ester is selected from cholesteryl palmitate, cholesteryl oleate and cholesteryl stearate. The propellant is selected from fluorocarbon, chlorofluorocarbon, hydrofluorocarbon and/or carbon dioxide. 95% of the lipid crystals has a particle size not more than 16 microns in diameter.

L16 ANSWER 3 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-626865 [67] WPIDS
CR 2001-090142 [10]; 2002-518837 [55]; 2002-589751 [63]; 2003-415715 [39]; 2003-605483 [57]
DNC C2002-176658
TI Method for reducing upper respiratory tract resistance comprises administration of an aerosol dose of a mixture of lipid crystals comprising lipid surfactants, **spreading agents** and propellants.
DC B05 B07
IN MAUTONE, A J; MAUTONE, A
PA (MAUT-I) MAUTONE A J; (SCRE-N) SCI DEV & RES INC
CYC 28
PI US 2002090344 A1 20020711 (200267)* 17p
WO 2003047522 A2 20030612 (200339) EN
RW: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
W: CA CN JP MX
ADT US 2002090344 A1 CIP of US 1999-450884 19991128, CIP of US 2000-639739 20000816, US 2001-11994 20011204; WO 2003047522 A2 WO 2002-US38368 20021129
PRAI US 2001-11994 20011204; US 1999-450884 19991128; US 2000-639739 20000816
AB US2002090344 A UPAB: 20030906
NOVELTY - A method of reducing resistance in the upper respiratory system comprises administration of an aerosol dose of a mixture of lipid crystals.

DETAILED DESCRIPTION - A method of reducing resistance in the upper respiratory system comprises administration of an aerosol dose of a mixture of lipid crystals comprising lipid surfactants, **spreading agents** and propellants in which the surfactants and **spreading agents** (sterols, lipids, fatty acids, cholesteryl esters, **phospholipids**, carbohydrates or proteins in powder form) are not soluble. On administration the propellants evaporate as the aerosolized mixture deposits on the epithelial lining of the upper respiratory tract and forms an amorphous **spread** film so reducing the surface tension and effecting a decrease in resistance to air flow.

INDEPENDENT CLAIMS are also included for:

(1) a method for administering agents effective in the treatment of upper respiratory system pathology directly to epithelial tissue lining the system while decreasing airflow resistance comprises administration of lipid crystals in combination with the agent as an aerosol as above; and

(2) processes for preparing an upper respiratory airway enhancing medicament.

ACTIVITY - Antiasthmatic.
MECHANISM OF ACTION - None given.
USE - The method is useful for reducing resistance in the upper respiratory system and respiratory delivery of therapeutic agents (claimed).
Dwg.0/0

TECH UPTX: 20021018
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The lipid **surfactant** preferably comprises 50-99.99 % and the **spreading agent** comprises 0.01-50 % of the composition.
The composition may be filled in a metered dose inhaler. The sterols are preferably cholesterol, ergosterol and/or cholecalciferol. The fatty acids are preferably palmitic acid and/or oleic acid. The lipids are preferably **phospholipids** and/or neutral lipids, especially 1,2-dipalmitoyl **phosphatidylcholine**, **diacylphosphatidylglycerol**, **diacylphosphatidylethanolamine**, **diacylphosphatidylserine** , **diacylphosphatidylinositol**, sphingomyelin, cardiolipin, lysophospholipid, plasmalogen, diether phosphonolipid and/or dialkylphospholipid. The carbohydrates are preferably glucose, fructose, galactose, pneumogalactan and/or dextrose. The **protein** is preferably albumin and/or pulmonary **surfactant** specific **proteins** A, **B**, **C** or D. The cholesteryl ester is preferably cholesteryl palmitate, cholesteryl oleate and/or cholesteryl stearate. The propellants are preferably fluorocarbons (chlorofluorocarbons and/or hydrofluorocarbons) or carbon dioxide. Preferably 95 % of the crystals have a size of less than 4 microns. The therapeutic **agent** is preferably an antiinflammatory (betamethasone), antibiotic (erythromycin, amoxicillin, zythromax or augmentin), decongestant (phenylephrine) or gene therapy **agent** (claimed).

L16 ANSWER 4 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-589751 [63] WPIDS
CR 2001-090142 [10]; 2002-518837 [55]; 2002-626865 [67]; 2003-415715 [39]; 2003-605483 [57]
DNN N2002-467994 DNC C2002-166769
TI Increasing mammalian external auditory canal patency and treating otitis externa, by administering a mixture of lipid crystals as aerosol, through ear to form an amorphous spread film on epithelium.
DC B05 B07 P32 P34
IN MAUTONE, A J; MAUTONE, A
PA (MAUT-I) MAUTONE A J; (SCRE-N) SCI DEV & RES INC
CYC 28
PI US 2002076383 A1 20020620 (200263)* 16p
WO 2003055410 A2 20030710 (200345) EN
RW: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
W: CA CN JP MX
ADT US 2002076383 A1 CIP of US 1999-450884 19991128, CIP of US 2000-639730 20000816, US 2001-11626 20011211; WO 2003055410 A2 WO 2002-US38367 20021129
PRAI US 2001-11626 20011211; US 1999-450884 19991128; US 2000-639730 20000816
AB US2002076383 A UPAB: 20030906
NOVELTY - A mammalian external auditory canal patency is increased by administering a mixture of lipid crystals, as an aerosol, through an external auditory meatus. When mixture is administered, the propellants are evaporated from mixture as lipid crystals come into contact with the epithelial lining of external auditory canal and form an amorphous spread film and a barrier to exogenous fluids.

DETAILED DESCRIPTION - A mammalian external auditory canal patency is increased by administering a mixture of lipid crystals, as an aerosol, through an external auditory meatus. The mixture contains lipid surfactant(s) for lowering surface tension of air/liquid interface resident upon epithelial tissue linking external auditory canal, **spreading agent**(s) for distributing surfactant on interface and propellant(s) in which surfactants and **spreading agents** are not soluble. The lipid surfactants and **spreading agents** are selected from lipids, sterols, fatty acids, cholesterol esters, **phospholipids**, carbohydrates and proteins in powder form. When mixture is administered, the propellants are evaporated from mixture as lipid crystals come into contact with the epithelial lining of external auditory canal and form an amorphous **spread** film and a barrier to exogenous fluids.

INDEPENDENT CLAIMS are included for the following:

(1) A process for preparing an external auditory canal patency enhancing and protective medicament; and

(2) A method of administering therapeutically active agents for treating otitis externa directly to mammalian external auditory canal tissues.

ACTIVITY - Auditory. No test details are given.

MECHANISM OF ACTION - None given.

USE - For treating and preventing occurrence of otitis externa.

ADVANTAGE - The method provides a barrier on the epithelial lining of the external auditory canal to protect it from the deleterious effects of water and water-born toxins, irritants and antigenic materials. The high surface tension associated with otitis externa is reduced to promote external auditory canal patency. The liquid barrier prevents contact of the epithelial lining with exogenous fluids while simultaneously reducing the surface tension of the air/liquid interface resident.

Dwg.0/0

TECH UPTX: 20021001

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Amount: The mixture contains (in wt.%) lipid surfactant (50-99.99, preferably 80-99.5) and **spreading agent** (0.01-50, preferably 0.5-20). A metered dose installation device is filled with mixture of lipid crystals and said device is utilized to administer a metered dose of mixture by means of an otic administration adaptor.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred **Spreading Agents**: Sterols are cholesterol, ergosterol and/or cholecalciferol. The fatty acids are palmitic acid and/or oleic acid. The lipids are **phospholipids** and/or neutral lipids. The **phospholipids** are phophtidylcholines such as fully saturated diacyl **phosphatidylcholine**. The fully saturated diacryl **phosphatidylcholine** is 1,2 dipalmitoyl **phosphatidylcholine** . The **phospholipid** is a **diacylphosphatidyl** glycerol, **diacylphosphatidyl** ethanolamine, **diacylphosphatidyl** serine, **diacylphosphatidyl** inositol, sphingomelin, Cardiolipin, lysophospholipid, plasmalogen, diether phosphonolipid and/or dialkylphospholipid. The carbohydrates are glucose, fructose, galactose, pneumogalactan and/or dextrose. The **protein** is selected from ~~albumin and pulmonary~~ **surfactant** specific **proteins** A or **B** or **C** and/or D. The cholesteryl ester is cholesteryl palmitate, cholesteryl oleate and/or cholesteryl stearate. The propellants are fluorocarbons such as chlorofluorocarbon, and/or hydrofluorocarbon. The propellant is carbon dioxide, which is pharmaceutical grade hypo-allergenic propellant in which neither the **surfactant** or **spreading agent** are soluble. 95% of crystals demonstrate a 30 particle size no greater than 4 mum in diameter.

Preferred Drug: The therapeutically active **agent** is an anti-inflammatory (betamethasone), antibiotic (erythromycin, amoxicillin, zythromax and/or Augmentin), decongestant (phenylephrine) or gene therapy **agent**.

L16 ANSWER 5 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2002-518837 [55] WPIDS
CR 2001-090142 [10]; 2002-589751 [63]; 2002-626865 [67]; 2003-415715 [39]; 2003-605483 [57]
DNN N2002-410720 DNC C2002-146687
TI Method of increasing and enhancing mammalian eustachian tube lumen patency and pressure equalization performance comprising administration of a dose of a mixture of lipid crystals as an aerosol.
DC B05 P34
IN MAUTONE, A J; MAUTONE, A
PA (MAUT-I) MAUTONE A J; (SCRE-N) SCI DEV & RES INC
CYC 28
PI US 2002064503 A1 20020530 (200255)* 16p
WO 2003047521 A2 20030612 (200339) EN
RW: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
W: CA CN JP MX
ADT US 2002064503 A1 Cont of US 1999-450884 19991128, CIP of US 2000-639682 20000816, US 2001-11344 20011204; WO 2003047521 A2 WO 2002-US38366 20021129
PRAI US 2001-11344 20011204; US 1999-450884 19991128; US 2000-639682 20000816
AB US2002064503 A UPAB: 20030906
NOVELTY - A new method of increasing and enhancing mammalian eustachian tube lumen patency and pressure equalization performance comprises administration of a dose of a mixture of lipid crystals as an aerosol through an external airway of the mammal.

DETAILED DESCRIPTION - A new method of increasing and enhancing mammalian eustachian tube lumen patency and pressure equalization performance comprises administration of a dose of a mixture of lipid crystals as an aerosol through an external airway of the mammal. The mixture comprises at least one lipid surfactant (in an amount effective in lowering surface tension of an air/liquid interface resident on epithelial tissue lining the lumen), at least one **spreading agent** (in an amount effective in distributing the surfactant within the lumen) and at least one propellant in which the surfactants and **spreading agents** are not soluble). The surfactants and **spreading agents** are selected from sterols, lipids, fatty acids, cholesteryl esters, **phospholipids**, carbohydrates and proteins, all in powder form. When the mixture is administered, the propellants are evaporated from the mixture as the lipid crystals come into contact with and deposit on the epithelial lining of the eustachian tube and form an amorphous **spread** film so as to reduce the opening pressure of the tube.

ACTIVITY - Auditory.

MECHANISM OF ACTION - None given.

USE - The method is useful for administering therapeutic agents, for treatment of otitis media, directly to mammalian eustachian tube and middle ear tissues. The therapeutic agent is distributed within the lumen and to the middle ear tissues.

Dwg.0/0

TECH UPTX: 20020829
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The lipid **surfactant** is present in an amount of 99.99-50 weight% (preferably 80-99.5 weight%) and the **spreading agent** is present in an amount of 50-0.1 weight% (preferably 20-0.5 weight%). The mixture

further comprises other therapeutically active **agents** e.g. the **spreading agent**.
Preferred Components: The sterols is cholesterol, ergosterol and/or cholecalciferol. The fatty acid is palmitic acid and/or oleic acid. The lipid is a **phospholipid** and/or neutral lipid. The phosholipids are **phosphatidylcholines**, preferably 1,2 dipalmitoyl **phosphatidylcholine**, **diacylphosphatidylglycerol**, **diacylphosphatidylethanolamine**, **diacylphosphatidylserine** , **diacylphosphatidylinositol**, sphingomelin, Cardiolipin, lysophospholipid, plasmalogen, diether phosphonolipid and/or dialkyl **phospholipid**. The carbohydrate is glucose, fructose, galactose, pneumogalactan and/or dextrose. The **protein** is albumin or a pulmonary **surfactant** specific **protein** A, **B**, **C** and/or D. The cholesteryl ester is cholesteryl palmitate, cholesteryl oleate and/or cholesteryl stearate. The propellant is a fluorocarbon (preferably a chlorofluorocarbon and/or hydrofluorocarbon), carbon dioxide or any pharmaceutical grade hypo-allergenic propellant in which neither the **surfactant** or **spreading agent** are soluble. 95 % Of the crystals have a particle size no greater than 4 microns in diameter.
Preferred Drugs: The therapeutically active **agent** is an antiinflammatory (preferably betamethasone), antibiotic (preferably erythromycin, amoxicillin, zythromax and Augmentin or mixtures of these), decongestant (preferably phenylephrine) or gene therapy **agent**.

L16 ANSWER 6 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2001-550045 [61] WPIDS
DNC C2001-163708
TI Heteropolymeric pulmonary **spreading agent** having at least one **N-substituted glycine** residue and an amino acid residue corresponding to a natural surfactant-associated protein, useful for treating lung respiratory distress.
DC B04
IN BARRON, A E; WU, C W; ZUCKERMANN, R N
PA (CHIR) CHIRON CORP; (NOUN) UNIV NORTHWESTERN
CYC 95
PI WO 2001060837 A2 20010823 (200161)* EN 39p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001038442 A 20010827 (200176)
EP 1267904 A2 20030102 (200310) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
KR 2002081330 A 20021026 (200317)
US 2003040468 A1 20030227 (200318)
CN 1404396 A 20030319 (200344)
JP 2003523348 W 20030805 (200353) 54p
ADT WO 2001060837 A2 WO 2001-US5145 20010216; AU 2001038442 A AU 2001-38442 20010216; EP 1267904 A2 EP 2001-910883 20010216, WO 2001-US5145 20010216; KR 2002081330 A KR 2002-710569 20020814; US 2003040468 A1 Provisional US 2000-182847P 20000216, US 2001-788308 20010216; CN 1404396 A CN 2001-805202 20010216; JP 2003523348 W JP 2001-560221 20010216, WO 2001-US5145 20010216
FDT AU 2001038442 A Based on WO 2001060837; EP 1267904 A2 Based on WO 2001060837; JP 2003523348 W Based on WO 2001060837
PRAI US 2000-182847P 20000216; US 2001-788308 20010216

AB WO 200160837 A UPAB: 20011024
NOVELTY - A non-natural heteropolymeric pulmonary **spreading agent** comprising at least one **N-substituted glycine** residue and at least one amino acid residue corresponding to a natural **surfactant**-associated **protein B** or **C**, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a pulmonary surfactant composition having physiological alveolar surface activity, comprising a non-natural heteropolymeric pulmonary **spreading agent**, and a component consisting of naturally-occurring **phospholipid**, non-natural analogs of **phospholipids**, commercial surface-active **agents** or their combinations;

(2) a method of using N-substituent to enhance conformational control of a surfactant-associated protein mimic compound, by preparing a surfactant-associated protein mimic composition having at least one glycine residue, where the preparation providing **N-substituent** of the **glycine** residue sufficient to enhance helical conformation of the composition;

(3) a method for controlling alveolar surface activity by preparing a pulmonary surfactant composition including a non-natural heteropolymeric **spreading agent** having at least one **N-substituted glycine** residue and a lipid admixture, and administering the composition to reduce alveolar surface tension;

(4) a method of using N-substitution to enhance the solubility of a helical surfactant-associated protein mimic compound by preparing a helical, monomeric surfactant-associated protein mimic compound having at least one glycine residue, and the composition providing **N-substitution** of the **glycine** residue sufficient to maintain the monomeric compound and increase the solubility of the compound;

(5) a method of using a polypeptoid to affect alveolar surface tension during an inhalation/exhalation cycle; and

(6) pulmonary surfactant compositions comprising a non-natural heteropolymeric **spreading agent** having the structure (I) or (II), and a lipid admixture combined with the **spreading agent**:

HN-**X1X2PVHLKR**(NX3)N-CONH2 (I)

HN-X1X2Pro/**NvalNpmNleuNlysNarg**(NX3)N-CONH2 (II)

In (I):

X1 and X2 = F residue and a C-palmitoyl residue.

In (II):

X1 and X2 = Npm, Noc and Nhd substituted glycine residues.

In (I) and (II):

NX3 = N-substituted polypeptide with X3 consisting of ssb or spe substituents;

N = integer 13-20.

ACTIVITY - Pulmonary.

MECHANISM OF ACTION - Protein therapy.

USE - The **spreading agent** are useful for treating respiratory distress of the lungs, for controlling surface alveolar activity, and for use in the preparation and/or administration of related pulmonary surfactant compositions.

ADVANTAGE - The peptoid **spreading agent** is monomeric, stable, has a helical structure, increased solubility and enhanced resistance to aggregation, unlike previous **agents** and compositions.

The major advantage of using polypeptoids for biomedical applications is that despite their close similarity to polypeptides, these molecules

are essentially invulnerable to protease degradation and hence are simultaneously more stable in vivo than polypeptides and less likely to be recognized by the immune system.

Further, the polypeptoids have enhanced bioavailability allowing lower doses thus reducing the need for multiple doses, and is safer and less expensive than natural surfactants, which contain animal proteins. The use of synthetic peptide analogs eliminates risks that are currently associated with surfactant replacement suing animal-derived formulations, including disease transmission risk from surfactant contaminated with pathogens, surfactant inhibition by immunological complexes and improved efficacy as compared to synthetic formulations.

Dwg.0/17

TECH UPTX: 20011024

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred **Spreading Agent**: The N-substituent is a group selected from carbon homologues to the a-carbon groups of naturally occurring alpha-substituted amino acids.

The **protein** is a **surfactant**-associated **protein B** and its residues 1-25, or a **surfactant**-associated **protein C** and its residues 1-35 or 5-32. The **surfactant**-associated **protein B** or **C** residues comprise at least 70% of the **spreading agent**. The residues are interspersed with the glycine residues.

Preferred Composition: The **phospholipids** a **dipalmitoylphosphatidylcholine**, **phosphatidylcholine**, **phosphatidylglycerol**, **phosphatidylethanolamine**, **phosphatidylinositol**, **phosphatidylserine**, or their combinations. The **surfactant** composition further includes a palmitic acid. The **spreading agent** is present at about 1-28 weight percent of the composition, and the **phospholipid** is present in an amount to reduce alveolar surface tension. The N-substituent is a moiety selected from carbon homologues to the alpha-carbon groups of naturally occurring alpha-substituted amino acids. Residues are interspersed with the glycine residues. The **surfactant** composition preferably has n = 15-16.

Preferred Method: To enhance conformation control of a **surfactant**-associated **protein** mimic compound, the N-substitution provides a substituent selected from (A), (**B**) or (**C**). The **protein** mimic compound further includes at least one amino acid residue corresponding to a natural **surfactant**-associated **protein B** or **C**.

(A) SPCM1:
H-NhdNhdProValIHisLeuLysAr(NpmNspeNspe)4Nspe2-NH2
SPCM2:
H-NocNocProValHisLeuLysArg(NpmNspeNspe)4Nspe2-NH2
SPCM3:
H-PhePheProValHisLeuLysArg(NpmNspeNspe)4Nspe2-NH2
(**B**) SPCM4:
H-NhdNhdProValHiosLeuLysArg(Nsb)14-NH2
SPCM5:
H-NocNocProValHisLeuLysArgv(Nsb)14-NH2
SPCM6:
H-PhePheProValHisLeuLysArg(Nsb)14-NH2
(**C**) SPCM7:
H-**NocNocNProNValNHisNLeuNLysNArg**(NpmNspeNspe)4Nspe2-NH2
SPCM8:
H-**NpmNpmNproNValNHisNLeuNLysNArg**(NpmNspeNspe)4Nspe2-NH2
SPCM9:
H-**NocNocNProNValNHisNLeuNLysNArg**(NpmNspeNspe)4Nspe2-NH2

The method of using polypeptide to affect alveolar surface tension during

an inhalation/exhalation cycle comprises providing a polypeptide component consistent of **N-substituted glycine** residues, combining the polypeptoid component with a surface-active lipid admixture so the combination has biomimetic alveolar surface activity, and administering the polypeptide/lipid combination to reduce alveolar surface tension.

L16 ANSWER 7 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2001-092727 [11] WPIDS
DNC C2001-027630
TI New surfactant protein C ester, useful in compositions for treating adult or infant respiratory distress, has improved stability and activity.
DC B04
IN GERNANDT, W; HAEFNER, D; ISE, W; STURM, E; ULRICH, W
PA (BYKG) BYK GULDEN LOMBERG CHEM FAB
CYC 1
PI DE 19927764 A1 20001221 (200111)* 8p
ADT DE 19927764 A1 DE 1999-19927764 19990617
PRAI DE 1999-19927764 19990617
AB DE 19927764 A UPAB: 20010224
NOVELTY - Surfactant protein C (I) in which the C-terminal amino acid is esterified by a 1-6C alcohol, or its salts.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a pharmaceutical composition containing (I).

ACTIVITY - Antinflammatory; antiasthmatic.

MECHANISM OF ACTION - (I) accelerates the spreading of surfactant in the alveoli.

USE - Artificial lung surfactant compositions containing (I) are used to treat or prevent pneumonia; bronchitis; meconium aspiration syndrome; chronic obstructive lung disease, asthma, cystic fibrosis, infant respiratory distress syndrome and/or acute lung injury (including adult respiratory distress syndrome).

ADVANTAGE - Esterification improves both surfactant activity and stability (particularly against aggregation during storage).

Dwg.0/1
TECH UPTX: 20010224
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred compounds: (I) has formula **X1GIPX2X2PVHLKRLLI**(V)6LIVVVIVGALLX3GL
X1 = F or is absent;
X2 = F or W;
X3 = I, L or S.
Particularly X1 is absent; X2 = F and X3 = I (designated SP-C(FF/I)).
The preferred ester residue is from methanol or 2-propanol.
Preferred Composition: This may include other surfactant proteins (SP), i.e. SP-A, unesterified SP-C or SP-B, and SP-C is particularly recombinant SP-C(FF/I). Other components of the composition are phospholipids (PL), fatty acids (FA) and electrolytes, particularly (by weight, dry matter basis) 80-95% PL; 0.2-5, especially 0.5-3,% SP; 2-15, especially 4-7,% FA, and 0-5, preferably 1-3,% electrolyte.
Preferred Materials: PL are particularly dipalmitoylphosphatidylcholine and palmitoyl-oleoylphosphatidyl glycerol; FA is palmitic acid and the electrolyte is calcium chloride. The surfactant is particularly used in spray-dried form.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: SP-C is particularly esterified by acid-catalyzed reaction with alcohol, using the alcohol (optionally mixed with e.g. chloroform or dichloromethane) as solvent, typically at room temperature.

L16 ANSWER 8 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

AN 2001-090142 [10] WPIDS
CR 2002-518837 [55]; 2002-589751 [63]; 2002-626865 [67]; 2003-415715 [39]; 2003-605483 [57]
DNN N2001-068261 DNC C2001-026295
TI Increasing mammalian eustachian tube lumen patency and pressure equalization performance, especially for treating otitis media, comprises intranasal administration of a lipid crystal dispersion as an aerosol.
DC B05 D22 P34
IN MAUTONE, A J
PA (MAUT-I) MAUTONE A J; (SCRE-N) SCI DEV & RES INC
CYC 24
PI US 6156294 A 20001205 (200110)* 11p
WO 2001037806 A1 20010531 (200132) EN
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA ES JP MX
AU 2000070798 A 20010604 (200153)
EP 1233753 A1 20020828 (200264) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2003514842 W 20030422 (200336) 34p
ADT US 6156294 A US 1999-450884 19991128; WO 2001037806 A1 WO 2000-US23540 20000828; AU 2000070798 A AU 2000-70798 20000828; EP 1233753 A1 EP 2000-959479 20000828, WO 2000-US23540 20000828; JP 2003514842 W WO 2000-US23540 20000828, JP 2001-539421 20000828
FDT AU 2000070798 A Based on WO 2001037806; EP 1233753 A1 Based on WO 2001037806; JP 2003514842 W Based on WO 2001037806
PRAI US 1999-450884 19991128
AB US 6156294 A UPAB: 20030906
NOVELTY - Increasing mammalian eustachian tube lumen patency and pressure equalization performance comprises:

(a) preparing a dispersion of lipid crystals by mixing lipids and **spreading agents** selected from cholesterol esters, **phospholipids**, carbohydrates and proteins, all in powder form, with a fluorocarbon propellant; and

(b) administering the dispersion intranasally as an aerosol.

DETAILED DESCRIPTION - Method for increasing mammalian eustachian tube lumen patency and pressure equalization performance comprises:

(a) preparing a dispersion of lipid crystals by mixing one or more lipids and **spreading agents** selected from cholesterol esters, **phospholipids**, carbohydrates and proteins, all in powder form, with a fluorocarbon propellant to obtain a dispersion containing 80-99.5 wt.% lipids and 0.5-20 wt.% **spreading agents**; and

(b) administering the dispersion intranasally as an aerosol.

An INDEPENDENT CLAIM is also included for a method for administering a therapeutic agent (I) effective in the treatment of otitis media directly to mammalian eustachian tube and middle ear tissues, comprising:

(a) preparing a dispersion of lipid crystals by mixing one or more lipids and **spreading agents** selected from cholesterol esters, **phospholipids**, carbohydrates and proteins, all in powder form, with (I) and a fluorocarbon propellant to obtain a dispersion containing 80-99.5 wt.% lipids and 0.5-20 wt.% **spreading agents**; and

(b) administering the dispersion intranasally as an aerosol.

ACTIVITY - Auditory.

MECHANISM OF ACTION - None given.

USE - The method is useful for treating otitis media (claimed).

ADVANTAGE - The propellant evaporates as the dispersion comes into contact with eustachian tube luminal tissue, depositing an amorphous spread film of lipid crystals on the tissue so as to reduce the opening pressure of the tube.

Dwg.0/0
TECH UPTX: 20010220
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The lipids are **phospholipids** and/or neutral lipids, especially **phospholipids** selected from **diacylphosphatidyl** cholines, glycerols, ethanolamines, serines and inositols, sphingomyelins, lysophospholipids, plasmalogen, diether phosphonolipids and dialkyl **phospholipids**. The cholesterol esters are cholesteryl palmitate, oleate and stearate and the carbohydrates are selected from glucose, fructose, galactose, pneumogalactan and dextrose. **Proteins** are selected from albumin and pulmonary **surfactant proteins** A, **B**, **C** and D. (I) is an antiinflammatory agent, especially betamethasone, an antibiotic, especially erythromycin, amoxicillin, zythromax or augmentin, or a decongestant, especially phenylephrine.
Preferred Propellant: This comprises chlorofluorocarbons and/or hydrofluorocarbons.

L17 ANSWER 1 OF 2 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2001-550045 [61] WPIDS
DNC C2001-163708
TI Heteropolymeric pulmonary **spreading agent** having at least one **N-substituted glycine** residue and an amino acid residue corresponding to a natural surfactant-associated protein, useful for treating lung respiratory distress.
DC B04
IN BARRON, A E; WU, C W; ZUCKERMANN, R N
PA (CHIR) CHIRON CORP; (NOUN) UNIV NORTHWESTERN
CYC 95
PI WO 2001060837 A2 20010823 (200161)* EN 39p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001038442 A 20010827 (200176)
EP 1267904 A2 20030102 (200310) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
KR 2002081330 A 20021026 (200317)
US 2003040468 A1 20030227 (200318)
CN 1404396 A 20030319 (200344)
JP 2003523348 W 20030805 (200353) 54p
ADT WO 2001060837 A2 WO 2001-US5145 20010216; AU 2001038442 A AU 2001-38442 20010216; EP 1267904 A2 EP 2001-910883 20010216, WO 2001-US5145 20010216; KR 2002081330 A KR 2002-710569 20020814; US 2003040468 A1 Provisional US 2000-182847P 20000216, US 2001-788308 20010216; CN 1404396 A CN 2001-805202 20010216; JP 2003523348 W JP 2001-560221 20010216, WO 2001-US5145 20010216
FDT AU 2001038442 A Based on WO 2001060837; EP 1267904 A2 Based on WO 2001060837; JP 2003523348 W Based on WO 2001060837
PRAI US 2000-182847P 20000216; US 2001-788308 20010216
AB WO 200160837 A UPAB: 20011024
NOVELTY - A non-natural heteropolymeric pulmonary **spreading agent** comprising at least one **N-substituted glycine** residue and at least one amino acid residue corresponding

to a natural surfactant-associated protein B or C, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a pulmonary surfactant composition having physiological alveolar surface activity, comprising a non-natural heteropolymeric pulmonary **spreading agent**, and a component consisting of naturally-occurring phospholipid, non-natural analogs of phospholipids, commercial surface-active **agents** or their combinations;

(2) a method of using N-substituent to enhance conformational control of a surfactant-associated protein mimic compound, by preparing a surfactant-associated protein mimic composition having at least one glycine residue, where the preparation providing **N-substituent** of the **glycine** residue sufficient to enhance helical conformation of the composition;

(3) a method for controlling alveolar surface activity by preparing a pulmonary surfactant composition including a non-natural heteropolymeric **spreading agent** having at least one **N-substituted glycine** residue and a lipid admixture, and administering the composition to reduce alveolar surface tension;

(4) a method of using N-substitution to enhance the solubility of a helical surfactant-associated protein mimic compound by preparing a helical, monomeric surfactant-associated protein mimic compound having at least one glycine residue, and the composition providing **N-substitution** of the **glycine** residue sufficient to maintain the monomeric compound and increase the solubility of the compound;

(5) a method of using a polypeptoid to affect alveolar surface tension during an inhalation/exhalation cycle; and

(6) pulmonary surfactant compositions comprising a non-natural heteropolymeric **spreading agent** having the structure (I) or (II), and a lipid admixture combined with the **spreading agent**:

HN-X1X2PVHLKR(NX3)N-CONH2 (I)

HN-X1X2Pro/NvalNpmNleuNlysNarg(NX3)N-CONH2 (II)

In (I):

X1 and X2 = F residue and a C-palmitoyl residue.

In (II):

X1 and X2 = Npm, Noc and Nhd substituted glycine residues.

In (I) and (II):

NX3 = N-substituted polypeptide with X3 consisting of ssb or spe substituents;

N = integer 13-20.

ACTIVITY - Pulmonary.

MECHANISM OF ACTION - Protein therapy.

USE - The **spreading agent** are useful for treating respiratory distress of the lungs, for controlling surface alveolar activity, and for use in the preparation and/or administration of related pulmonary surfactant compositions.

ADVANTAGE - The peptoid **spreading agent** is monomeric, stable, has a helical structure, increased solubility and enhanced resistance to aggregation, unlike previous **agents** and compositions.

The major advantage of using polypeptoids for biomedical applications is that despite their close similarity to polypeptides, these molecules are essentially invulnerable to protease degradation and hence are simultaneously more stable in vivo than polypeptides and less likely to be recognized by the immune system.

Further, the polypeptoids have enhanced bioavailability allowing lower doses thus reducing the need for multiple doses, and is safer and less expensive than natural surfactants, which contain animal proteins.

The use of synthetic peptide analogs eliminates risks that are currently associated with surfactant replacement suing animal-derived formulations, including disease transmission risk from surfactant contaminated with pathogens, surfactant inhibition by immunological complexes and improved efficacy as compared to synthetic formulations.
Dwg.0/17

TECH UPTX: 20011024

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred **Spreading Agent**: The N-substituent is a group selected from carbon homologues to the a-carbon groups of naturally occurring alpha-substituted amino acids.
The protein is a surfactant-associated protein B and its residues 1-25, or a surfactant-associated protein C and its residues 1-35 or 5-32. The surfactant-associated protein B or C residues comprise at least 70% of the **spreading agent**. The residues are interspersed with the glycine residues.
Preferred Composition: The phospholipids a dipalmitoylphosphatidylcholine, phosphatidylcholine, phosphatidylglycerol, phosphatidylethanolamine, phosphatidylinositol, phosphatidylserine, or their combinations. The surfactant composition further includes a palmitic acid. The **spreading agent** is present at about 1-28 weight percent of the composition, and the phospholipid is present in an amount to reduce alveolar surface tension. The N-substituent is a moiety selected from carbon homologues to the alpha-carbon groups of naturally occurring alpha-substituted amino acids.
Residues are interspersed with the glycine residues. The surfactant composition preferably has n = 15-16.
Preferred Method: To enhance conformation control of a surfactant-associated protein mimic compound, the N-substitution provides a substituent selected from (A), (B) or (C). The protein mimic compound further includes at least one amino acid residue corresponding to a natural surfactant-associated protein B or C.
(A) SPCM1:
H-NhdNhdProVallHisLeuLysAr(NpmNspeNspe)4Nspe2-NH2
SPCM2:
H-NocNocProValHisLeuLysArg(NpmNspeNspe)4Nspe2-NH2
SPCM3:
H-PhePheProValHisLeuLysArg(NpmNspeNspe)4Nspe2-NH2
(B) SPCM4:
H-NhdNhdProValHiosLeuLysArg(Nsb)14-NH2
SPCM5:
H-NocNocProValHisLeuLysArgv(Nsb)14-NH2
SPCM6:
H-PhePheProValHisLeuLysArg(Nsb)14-NH2
(C) SPCM7:
H-NocNocNProNValNHisNLeuNLysNArg(NpmNspeNspe)4Nspe2-NH2
SPCM8:
H-NpmNpmNproNValNHisNLeuNLysNArg(NpmNspeNspe)4Nspe2-NH2
SPCM9:
H-NocNocNProNValNHisNLeuNLysNArg(NpmNspeNspe)4Nspe2-NH2
The method of using polypeptide to affect alveolar surface tension during an inhalation/exhalation cycle comprises providing a polypeptide component consistent of **N-substituted glycine** residues, combining the polypeptoid component with a surface-active lipid admixture so the combination has biomimetic alveolar surface activity, and administering the polypeptide/lipid combination to reduce alveolar surface tension.

L17 ANSWER 2 OF 2 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1988-052786 [08] WPIDS

DNC C1988-023507
TI Paddy field herbicidal compsn. - comprises **N**-chloroacetyl-**N**-(**substd.**) **glycine** ethyl ester with propionanilide cpd. and/or pyrazole deriv..
DC C02 C03
PA (MITP) MITSUBISHI PETROCHEMICAL CO LTD
CYC 1
PI JP 63008303 A 19880114 (198808)* 6p
ADT JP 63008303 A JP 1986-150725 19860627
PRAI JP 1986-150725 19860627
AB JP 63008303 A UPAB: 19930923
Compsn. contains as active component a mixt. of N-chloroacetyl -N-(2,6-diethylphenyl) glycine ethyl ester (I) with 2-(2,4-dichloro-3-methylphenoxy) propionanilide (II) and/or 4-(2,4-dichloro-3-methylbenzoyl) -1,3-dimethyl-5-(p-methyl-phenacyloxy) pyrazole (III).

Use amt. of (II) or (III) is 0.2-20pts.wt., pref. use amt. of (II) is 0.5-3 pts.wt., and the use amt. of (III) is 2-10 pts.wt. per 1 pt.wt. of (I). The active mixt. is used at a rate of 0.1-4 kg, pref. 0.3-2 kg, per 1 ha.

Highest herbicidal effect is obtd. by using the active mixt. 3-8 days after transplantation. The active mixt. is formulated as granule, emulsion, wettable powder, sol, etc. by mixing with carriers, emulsifying **agent**, dispersing **agent**, suspending **agent**, penetrating **agent**, **spreader** and stabiliser.

USE/ADVANTAGE - The compsn. shows the herbicidal effect to annual and perennial broadleaf weeds, and ca be used during the period from just after transplantation to the weed growth stage. It is safe to paddy rice. The mixt. shows synergistic effect. The herbicidal effect lasts for long period. (I), (II) and (III) are known as herbicide.
0/0